

Set	Items	Description
S1	47437	SPINE? OR SPINAL? OR VERTEBRA? OR INTERVERTEBRA? OR CERVICAL? OR LUMBAR?
S2	248064	PROSTHE? OR IMPLANT? OR ENDOPROSTHE? OR REPLACEMENT? OR ARTHROPLAST?
S3	153745	ENDPLATE? OR BASEPLATE? OR COVERPLATE? OR (COVER?? OR COVERING? OR END OR BASE)() PLATE? ?
S4	1178325	CORE OR CORES OR DISC OR DISCS OR DISK OR DISKS OR DISCUS
S5	644490	SECURE? ? OR SECURING
S6	1414719	LIMIT??? OR STOP OR STOPS OR STOPP??? OR RESTRICT?
S7	2336783	OUTER OR OVER OR VENTRAL? OR DORSAL?
S8	4207961	PLATE OR PLATES OR MEMBER? ? OR SHELL? ? OR SHEET? ? OR PANEL? ?
S9	1589595	UNCONNECT? OR DISCONNECT? OR SEPARAT?
S10	6477806	COUPL??? OR ATTACH? OR CONNECT? OR SECUR??? OR JOIN OR JOINED OR JOINING OR FASTEN??? OR ENGAG???
S11	391617	IC=(A61B? OR A61F? OR A61D?)
S12	273222	S5:S7(3N)S8
S13	2	S1 AND S2 AND S3 AND S4 AND S12 AND (S9 OR "NOT"(3N)S10)
S14	1305	S1(5N)S8(5N)S10
S15	273	S14 AND S2
S16	32	S14 AND S2 AND S3 AND S4
S17	30	(S16 NOT S13) AND S11
S18	30	S17 AND S11
S19	3	S1 AND S2 AND S3 AND S12 AND (S9 OR "NOT"(3N)S10)
S20	1	S19 NOT S13
S21	8	S1 AND S2 AND S4 AND S12 AND (S9 OR "NOT"(3N)S10)
S22	6	S21 NOT S19
S23	5	S2 AND S3 AND S4 AND S12 AND (S9 OR "NOT"(3N)S10)
S24	3	S23 NOT (S19 OR S22)
S25	66	S2 AND S3:S4 AND S12 AND (S9 OR "NOT"(3N)S10)
S26	12	S25 AND S11
S27	3	S26 NOT (S19 OR S22)
S28	180	S1 AND S2 AND S12
S29	87	S1 AND S2 AND S12 AND S3:S4
S30	76	(S29 NOT (S19 OR S22 OR S27)) AND S11
S31	40	S1(S)S2(S)S12(S)S3:S4
S32	36	S31 NOT (S19 OR S22 OR S27)
S33	61302	"NOT"(3N)S10
S34	109342	(S9 OR S33)(5N)S8
S35	37	S34 AND S1 AND S2
S36	32	S35 NOT (S19 OR S22 OR S27 OR S32)
S37	29	S36 AND S11
S38	63	S34 (S) S2 (S)S5:S6
S39	13	S38 AND S11
S40	7	S39 NOT (S19 OR S22 OR S27 OR S32 OR S36)

File 347:JAPIO Nov 1976-2005/Oct(Updated 060203)

(c) 2006 JPO & JAPIO

File 350:Derwent WPIX 1963-2006/UD,UM &UP=200613

(c) 2006 Thomson Derwent

?

Set	Items	Description
S1	47437	SPINE? OR SPINAL? OR VERTEBRA? OR INTERVERTEBRA? OR CERVICAL? OR LUMBAR?
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S6	1414719	LIMIT??? OR STOP OR STOPS OR STOPP??? OR RESTRICT?
S7	2336783	OUTER OR OVER OR VENTRAL? OR DORSAL?
S8	4207961	PLATE OR PLATES OR MEMBER? ? OR SHELL? ? OR SHEET? ? OR PANEL? ?
S9	1589595	UNCONNECT? OR DISCONNECT? OR SEPARAT?
S10	6477806	COUPL??? OR ATTACH? OR CONNECT? OR SECUR??? OR JOIN OR JOINED OR JOINING OR FASTEN??? OR ENGAG???
S11	391617	IC=(A61B? OR A61F? OR A61D?)
S12	273222	S5:S7(3N)S8
S13	2	S1 AND S2 AND S3 AND S4 AND S12 AND (S9 OR "NOT"(3N)S10)
S14	1305	S1(5N)S8(5N)S10
S15	273	S14 AND S2
S16	32	S14 AND S2 AND S3 AND S4
S17	30	(S16 NOT S13) AND S11
S18	30	S17 AND S11
S19	3	S1 AND S2 AND S3 AND S12 AND (S9 OR "NOT"(3N)S10)
S20	1	S19 NOT S13
S21	8	S1 AND S2 AND S4 AND S12 AND (S9 OR "NOT"(3N)S10)
S22	6	S21 NOT S19
S23	5	S2 AND S3 AND S4 AND S12 AND (S9 OR "NOT"(3N)S10)
S24	3	S23 NOT (S19 OR S22)
S25	66	S2 AND S3:S4 AND S12 AND (S9 OR "NOT"(3N)S10)
S26	12	S25 AND S11
S27	3	S26 NOT (S19 OR S22)
S28	180	S1 AND S2 AND S12
S29	87	S1 AND S2 AND S12 AND S3:S4
S30	76	(S29 NOT (S19 OR S22 OR S27)) AND S11
S31	40	S1(S)S2(S)S12(S)S3:S4
S32	36	S31 NOT (S19 OR S22 OR S27)

File 347:JAPIO Nov 1976-2005/Oct(Updated 060203)

(c) 2006 JPO & JAPIO

File 350:Derwent WPIX 1963-2006/UD,UM &UP=200613

(c) 2006 Thomson Derwent

13/5/1 (Item 1 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

012436988 **Image available**
WPI Acc No: 1999-243096/199920
XRPX Acc No: N99-180923

Self-centering intervertebral prosthetic disc for replacing
damaged, diseased, pathologic, degenerated or ruptured intervertebral
discs

Patent Assignee: ROGOZINSKI C (ROGO-I)
Inventor: ROGOZINSKI C
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5888226	A	19990330	US 97968412	A	19971112	199920 B

Priority Applications (No Type Date): US 97968412 A 19971112

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5888226	A		10	A61F-002/44	

Abstract (Basic): US 5888226 A

NOVELTY - The **disc** (10) has bilaterally symmetrical superior (11) and inferior (12) convex surfaces joined by a vertical non-linear wall (41). **Separate vertebral** attachment (20) **base plates** (23) are **secured** to a **vertebrae** and has a concave surface (24) corresponding to one of the convex surfaces so that the attachments retain the **disc** in a manner to allow relative sliding and rotation.

DETAILED DESCRIPTION - A non-central major vertical axis (13) at the point of maximum vertical dimension between the surfaces and a central vertical axis (14) passes through an anterior-posterior axis (15).

USE - Maintains proper spatial relationship between adjacent **vertebrae** while allowing for movement of the **vertebrae** similarly and consistently with the range and type of motion found prior to pathology, degeneration or rupture, while maintaining proper alignment of the **spine** and **vertebrae** in the frontal and sagittal plane.

ADVANTAGE - Successfully replicates the range, angle and type of movement between the adjacent **vertebrae**. Composes of a durable, rigid and biocompatible material of high strength so as to withstand millions of loading cycles without failure or degradation. Convex surfaces are not in parallel so as to better replicate the configuration of the human **disc** and proper **spinal** alignment.

DESCRIPTION OF DRAWING(S) - The figures show a cross sectional view of the **disc** retained between the concave surfaces of two **vertebral** attachments and a side view where the two convex surfaces are sections of a sphere:

Disc (10)
Superior convex surface (11)
Inferior convex surface (12)
Non-central major vertical axis (13)
Central vertical axis (14)
Anterior-posterior axis (15)
Vertebral attachment (20)
Vertebral attachment **base plates** (23)
Concave surface of attachment (24)
Vertical non-linear wall (41)
pp; 10 DwgNo 9, 10/12

Title Terms: SELF; CENTRE; **INTERVERTEBRAL** ; **PROSTHESIS** ; **DISC** ; REPLACE;

DAMAGE; DISEASE; DEGENERATE; RUPTURE; INTERVERTEBRAL ; DISC
Derwent Class: P32
International Patent Class (Main): A61F-002/44
File Segment: EngPI

13/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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008426887 **Image available**
WPI Acc No: 1990-313888/199042
XRAM Acc No: C90-135693
XRPX Acc No: N90-240770

Spinal disc prosthesis - with flat rigid plates sepd. by polyolefin
rubber core

Patent Assignee: ACROMED CORP (ACRO-N)
Inventor: STEFFEE A D
Number of Countries: 007 Number of Patents: 009
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 392076	A	19901017	EP 89118225	A	19891002	199042 B
JP 2215461	A	19900828				199042
HU 52938	T	19900928				199045
ZA 8909570	A	19900926				199045
CS 9000640	A	19910611				199134
US 5071437	A	19911210	US 90617923	A	19901121	199201
CA 1318469	C	19930601	CA 612589	A	19890922	199327
JP 93053132	B	19930809	JP 89285987	A	19891101	199334
KR 9505330	B1	19950523	KR 901971	A	19900215	199704

Priority Applications (No Type Date): US 89311619 A 19890215; US 90617923 A 19901121

Cited Patents: 1.Jnl.Ref; EP 197441; EP 298235; EP 317972; EP 356112; FR 1122634; US 4309777

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 93053132	B		7	A61F-002/44	Based on patent JP 2215461
CA 1318469	C			A61F-002/44	
KR 9505330	B1			A61F-002/44	

Abstract (Basic): EP 392076 A

Prosthesis to replace a damaged **spinal disc** has upper (12) and lower (14) rigid plates sepd. by a flat **core** (16) of polyolefin rubber which is adhered to the plates.

Pref., plates (12,14) are of biocompatible unalloyed titanium, titanium vanadium aluminium-, cobalt chromium-, cobalt-chromium-molybdenum- or cobalt-nickel-chromium-molybdenum-alloy, or 316 LVM, or similar, stainless steel which may be formed as layers of metal particles, or coated with metal particles. Or plates may be of an organic matrix with graphite fibres. The plates have projections (28), which may be hollow, to engage adjacent **vertebrae**.

USE/ADVANTAGE - As an artificial **spinal disc** to replace a damaged or deaerated **disc**. Transmits loads with even distribution of load across the **disc**, acts as a shock absorber, enables relative turning of the **end plates**, **limited** to about 2-3 deg. as in a natural **disc**, and allows bending of back in various directions, limited to normal physiological angles.

Dwg.1/6

Title Terms: **SPINE ; DISC ; PROSTHESIS ; FLAT; RIGID; PLATE; SEPARATE ; POLYOLEFIN; RUBBER; CORE**

Derwent Class: A96; D22; M26; M27; P32; P34
International Patent Class (Main): A61F-002/44
International Patent Class (Additional): A61L-027/00
File Segment: CPI; EngPI
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18/5/13 (Item 13 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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016960084 **Image available**

WPI Acc No: 2005-284395/200529

XRPX Acc No: N05-233246

Spinal implant system for treating compromised vertebral body due to e.g. unstable burst fractures, includes vertebral prosthesis having support and endplate, and artificial spinal disc coupled to endplate

Patent Assignee: SWEENEY P J (SWEE-I)

Inventor: SWEENEY P J

Number of Countries: 108 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050085910	A1	20050421	US 2003686998	A	20031016	200529 B
WO 200537134	A2	20050428	WO 2004US33765	A	20041013	200529

Priority Applications (No Type Date): US 2003686998 A 20031016

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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US 20050085910	A1	22	A61F-002/44	
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WO 200537134	A2 E		A61F-000/00	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ
NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ
UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL
SZ TR TZ UG ZM ZW

Abstract (Basic): US 20050085910 A1

NOVELTY - The spinal **implant** system includes a vertebral **prosthesis** (10) having a support and an **endplate**, and an artificial **spinal disc** (80) **coupled** to the **end plate**. Preferably, the **endplate** has a structure adapted to interlock with the artificial **spinal disc** to prevent rotation of the artificial **spinal disc** relative to the **endplate**.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of replacing a vertebral body and at least one adjacent **spinal disc**.

USE - For treating compromised vertebral body due to e.g. unstable burst fractures, severe compression fractures, and tumor decompression.

ADVANTAGE - Provides vertebral **prosthesis** that may be used with or without spinal fusion procedure to provide flexibility to the surgeon performing the vertebral **replacement** surgery, and that may be used in conjunction with artificial **discs** having different configurations in order to provide procedural flexibility. Provides vertebral **prosthesis** that is configured to be used with or without pedicle screws.

DESCRIPTION OF DRAWING(S) - The figure is a perspective view of a vertebral **prosthesis** and one **disc prosthesis** inserted into a spine.

Vertebral **prosthesis** (10)

Endplate tray (14)

Shaft (16)

Artificial spinal **disc** (80)

Bearing surface (86)

pp; 22 DwgNo 14/24
Title Terms: SPINE; **IMPLANT** ; SYSTEM; TREAT; COMPROMISE; VERTEBRA; BODY;
UNSTABLE; BURST; FRACTURE; VERTEBRA; **PROSTHESIS** ; SUPPORT; ARTIFICIAL;
SPINE; **DISC** ; COUPLE
Derwent Class: P32
International Patent Class (Main): **A61F-000/00 ; A61F-002/44**
File Segment: EngPI

18/5/16 (Item 16 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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016589828 **Image available**
WPI Acc No: 2004-748563/200473
Related WPI Acc No: 2004-748562
XRPX Acc No: N04-591426

Cervical intervertebral prosthesis used for replacing a cervical intervertebral disk comprises a dorsolateral boundary having a greater minimum distance from a dorsal corner than an anterolateral boundary from a ventral corner

Patent Assignee: CERVITECH INC (CERV-N)
Inventor: KELLER A; LINK H; MCAFEE P C; LINK H D
Number of Countries: 109 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200489259	A1	20041021	WO 2004EP1498	A	20040217	200473 B
EP 1610731	A1	20060104	EP 2004711582	A	20040217	200603
			WO 2004EP1498	A	20040217	

Priority Applications (No Type Date): EP 20038127 A 20030407
Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200489259 A1 G 23 A61F-002/44

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ
NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ
UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR
TZ UG ZM ZW

EP 1610731 A1 G A61F-002/44 Based on patent WO 200489259

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

Abstract (Basic): WO 200489259 A1

NOVELTY - **Cervical intervertebral prosthesis** comprises a **covering plate** provided with a **connecting surface** for **connecting** to a **vertebral body**. The dorsolateral boundary (24) of the connecting surface of each adjacent dorsal corner (29) of an imaginary right angle (21) describing the peripheral contour (14) of the top plate has a greater minimum distance (28) than the anterolateral boundary of the adjacent ventral corners (27).

DETAILED DESCRIPTION - Preferred Features: The minimum distance of the boundary of the connecting surface from the dorsal corners is at least 1.3 times longer than the minimum distance from the ventral corners.

USE - Used for replacing a cervical intervertebral **disk**.

ADVANTAGE - Utilization of the available space is improved.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of the connecting surface and edge contour.

peripheral contour (14)
imaginary right angle (21)
dorsolateral boundary (24)
ventral corner (27)
minimum distance (28)
dorsal corner (29)
pp; 23 DwgNo 10/10

Title Terms: CERVIX; INTERVERTEBRAL; **PROSTHESIS** ; REPLACE; CERVIX;
INTERVERTEBRAL; **DISC** ; COMPRISE; BOUNDARY; GREATER; MINIMUM; DISTANCE;
DORSAL; CORNER; BOUNDARY; VENTRAL; CORNER

Derwent Class: P32

International Patent Class (Main): **A61F-002/44**

File Segment: EngPI

18/5/18 (Item 18 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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016531615 **Image available**

WPI Acc No: 2004-690181/200467

XRPX Acc No: N04-546902

Prosthesis for replacing cervical intervertebral disk , has cover plate having connection surface with dorsolateral limit from dorsal corner of imaginary rectangle having greater minimum distance than anterolateral limit from ventral corners

Patent Assignee: CERVITECH INC (CERV-N)

Inventor: KELLER A; LINK H D; MCAFEE P C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040199253	A1	20041007	US 2003407946	A	20030407	200467 B

Priority Applications (No Type Date): US 2003407946 A 20030407

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040199253	A1		6	A61F-002/44	

Abstract (Basic): US 20040199253 A1

NOVELTY - The **prosthesis** includes a **cover plate** (10) having a connection surface (10) with a dorsolateral limit from an adjacent dorsal corner of an imaginary rectangle having greater minimum distance than an anterolateral limit from the adjacent ventral corners. The imaginary rectangle is circumscribing the circumferential contour of the **cover plate** .

USE - For replacing cervical intervertebral **disk** .

ADVANTAGE - Permits the best possible utilization of space.

Prevents causing irritations on the esophagus and large blood vessels when the **prosthesis** is used.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of the cervical intervertebral **disk prosthesis** .

Core (2)

Connection surface (10)

Cover. plate (10)

Edge (14)

Oblique transition surface (25)

pp; 6 DwgNo 2/10

Title Terms: **PROSTHESIS** ; REPLACE; CERVIX; INTERVERTEBRAL; **DISC** ; COVER;

PLATE; CONNECT; SURFACE; LIMIT; DORSAL; CORNER; IMAGINARY; RECTANGLE;
GREATER; MINIMUM; DISTANCE; LIMIT; VENTRAL; CORNER
Derwent Class: P32
International Patent Class (Main): A61F-002/44
File Segment: EngPI

18/5/19 (Item 19 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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016220812 **Image available**
WPI Acc No: 2004-378700/200436
XRAM Acc No: C04-142213
XRPX Acc No: N04-301341

Spinal column prosthesis for bridging a vertebra comprises a joint replacing an intervertebral disk between the bridging part and an outer cover plate

Patent Assignee: LINK GMBH & CO WALDEMAR (LINS)
Inventor: KELLER A; MCAFEE P C
Number of Countries: 030 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1417940	A1	20040512	EP 200225113	A	20021108	200436 B

Priority Applications (No Type Date): EP 200225113 A 20021108

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1417940	A1	G	8	A61F-002/44	

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

Abstract (Basic): EP 1417940 A1

NOVELTY - **Spinal column prosthesis** comprises two opposing outer cover plates (4, 18) for connecting to two vertebrae , and a bridging part (13) for bridging at least one vertebra located between the two vertebrae. A joint (9, 11) replacing an intervertebral disk is provided between the bridging part and at least one of the two outer cover plates .

DETAILED DESCRIPTION - Preferred Features: An intervertebral disk replacement joint is arranged between the bridging part and each outer cover plate . The bridging part has a holding device (17) for the bridged vertebra.

USE - For bridging a vertebra.

ADVANTAGE - The holding device and the rigid connection between the bridging part and the vertebra stabilizes the vertebra, and the vertebra has a stabilizing effect on the prosthesis .

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-section through the prosthesis .

outer cover plate (4, 18)
fixing flange (5)
screw hole (6)
joint (9, 11)
bridging part (13)
holding device (17)
pp; 8 DwgNo 1/5

Title Terms: SPINE; COLUMN; PROSTHESIS ; BRIDGE; VERTEBRA; COMPRISE; JOINT
; REPLACE; INTERVERTEBRAL; DISC ; BRIDGE; PART; OUTER; COVER; PLATE

Derwent Class: D22; P32

International Patent Class (Main): A61F-002/44

International Patent Class (Additional): A61F-002/30

File Segment: CPI; EngPI

18/5/22 (Item 22 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015925000 **Image available**

WPI Acc No: 2004-082840/200408

XRPX Acc No: N04-066167

Spine disc replacement system, has intradiscal unit including surfaces to articulate with semi-cylindrical articular surfaces of anchor plates, respectively

Patent Assignee: NUVASIVE INC (NUVA-N); VALANTINE K (VALA-I); BLAIN J (BLAI-I)

Inventor: BLAIN J

Number of Countries: 103 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200402291	A2	20040108	WO 2003US20333	A	20030626	200408 B
AU 2003247751	A1	20040119	AU 2003247751	A	20030626	200447
EP 1534194	A2	20050601	EP 2003762139	A	20030626	200536
			WO 2003US20333	A	20030626	
US 20050159818	A1	20050721	WO 2003US20333	A	20030626	200548
			US 200416044	A	20041217	
AU 2003247751	A8	20040119	AU 2003247751	A	20030626	200559

Priority Applications (No Type Date): US 2002392206 P 20020626; US 200416044 A 20041217

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200402291 A2 E 29 A61B-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

AU 2003247751 A1 A61B-000/00 Based on patent WO 200402291

EP 1534194 A2 E A61F-002/44 Based on patent WO 200402291

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

US 20050159818 A1 A61F-002/44 Cont of application WO 2003US20333

AU 2003247751 A8 A61B-000/00 Based on patent WO 200402291

Abstract (Basic): WO 200402291 A2

NOVELTY - The system (10) has a pair of anchor **plates** (12,14) with surfaces to **engage** respective **vertebra** and semi-cylindrical articular surfaces (18,20). An intradiscal unit (16) has an articular surface (22) to articulate with the semi cylindrical articular surface (18) of the plate (12). Another articular surface (24) articulates with the semi cylindrical articular surface (20) of the plate (14).

USE - Used for spinal surgery.

ADVANTAGE - The intradiscal unit prevents dislocation of the anchor plates from vertebral **end plates** and over-distraction of the vertebral **endplates** during introduction and entry of particulate wear and debris of the system parts.

DESCRIPTION OF DRAWING(S) - The drawing shows an exploded

perspective view of the total disc replacement system.

Disc replacement system (10)

Anchor plates (12,14)

Intradiscal unit (16)

Semi cylindrical articular surfaces of anchor plates (18,20)

Articular surfaces of intradiscal unit (22,24)

pp; 29 DwgNo 2/36

Title Terms: SPINE; DISC ; REPLACE; SYSTEM; UNIT; SURFACE; ARTICULATE;
SEMI; CYLINDER; ARTICULAR; SURFACE; ANCHOR; PLATE; RESPECTIVE

Derwent Class: P31; P32

International Patent Class (Main): A61B-000/00 ; A61F-002/44

File Segment: EngPI

18/5/25 (Item 25 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015629332 **Image available**

WPI Acc No: 2003-691514/200366

Related WPI Acc No: 2003-691512; 2003-691513; 2003-713054

XRPX Acc No: N03-552473

Intervertebral prosthesis has cover plates attached to adjacent
vertebrae and connected to central core to form joint

Patent Assignee: LINK GMBH & CO WALDEMAR (LINS); CERVITECH INC (CERV-N)

Inventor: KELLER A; MCAFEE P; MCAFEE P C; MCAFEE P C

Number of Countries: 101 Number of Patents: 012

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1344508	A1	20030917	EP 20025632	A	20020312	200366 B
WO 200375803	A1	20030918	WO 2002EP11524	A	20021015	200371
US 20030176923	A1	20030918	US 2003340726	A	20030113	200382
AU 2002346916	A1	20030922	AU 2002346916	A	20021015	200435
US 20040102846	A1	20040527	US 2003356711	A	20030203	200435
EP 1482875	A1	20041208	EP 2002782913	A	20021015	200480
			WO 2002EP11524	A	20021015	
BR 200215639	A	20041221	BR 200215639	A	20021015	200509
			WO 2002EP11524	A	20021015	
KR 2005026696	A	20050315	KR 2004714208	A	20040910	200557
JP 2005526550	W	20050908	WO 2002EP11524	A	20021015	200559
			JP 2003574081	A	20021015	
CN 1622793	A	20050601	CN 2002828510	A	20021015	200560
ZA 200407101	A	20050831	ZA 20047101	A	20040906	200561
US 20050256579	A1	20051117	US 2003340726	A	20030113	200576
			US 2005188003	A	20050725	

Priority Applications (No Type Date): EP 20025632 A 20020312; EP 20025630 A
20020312; EP 20025631 A 20020312

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1344508 A1 G 8 A61F-002/44

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI TR

WO 200375803 A1 G A61F-002/44

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA
ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

US 20030176923 A1 A61F-002/44
 AU 2002346916 A1 A61F-002/44 Based on patent WO 200375803
 US 20040102846 A1 A61F-002/44
 EP 1482875 A1 G A61F-002/44 Based on patent WO 200375803
 Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
 GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
 BR 200215639 A A61F-002/44 Based on patent WO 200375803
 KR 2005026696 A A61F-002/44
 JP 2005526550 W 19 A61F-002/44 Based on patent WO 200375803
 CN 1622793 A A61F-002/44
 ZA 200407101 A 38 A61F-000/00
 US 20050256579 A1 A61F-002/44 Div ex application US 2003340726

Abstract (Basic): EP 1344508 A1

NOVELTY - The **intervertebral prosthesis** has a first **cover plate** (1) attached to one **vertebra** and a second **cover plate** (2) attached to the adjacent **vertebra**. The **prosthesis** has a **core** (10) with contoured surfaces to define a joint with one of the **cover plates**. The other **cover plate** to **core** joint allows directional adjustment.

USE - For vertebral **prostheses**.

ADVANTAGE - Allows compact height with joint flexibility.

DESCRIPTION OF DRAWING(S) - Drawing shows exploded view of **prosthesis**.

Cover plates (1,2)

Core (10)

pp; 8 DwgNo 3/6

Title Terms: INTERVERTEBRAL; **PROSTHESIS**; COVER; PLATE; ATTACH; ADJACENT;
 VERTEBRA; CONNECT; CENTRAL; **CORE**; FORM; JOINT

Derwent Class: P32

International Patent Class (Main): **A61F-000/00**; **A61F-002/44**

File Segment: EngPI

18/5/26 (Item 26 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015629331 **Image available**

WPI Acc No: 2003-691513/200366

Related WPI Acc No: 2003-691512; 2003-691514; 2003-713054

XRPX Acc No: N03-552472

Intervertebral joint prosthesis has sliding surface extending over width of core to prevent latter from lifting

Patent Assignee: LINK GMBH & CO WALDEMAR (LINS); CERVITECH INC (CERV-N)

Inventor: KELLER A; MCAFEE P; MCAFEE P C; MCAFFE P C

Number of Countries: 101 Number of Patents: 014

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1344507	A1	20030917	EP 20025631	A	20020312	200366 B
WO 200375803	A1	20030918	WO 2002EP11524	A	20021015	200371
US 20030176923	A1	20030918	US 2003340726	A	20030113	200382
BR 200303375	A	20040323	BR 20033375	A	20030221	200422
			WO 2003EP1803	A	20030221	
US 20040083000	A1	20040429	US 2003349183	A	20030123	200429
AU 2002346916	A1	20030922	AU 2002346916	A	20021015	200435
AU 2003206943	A1	20030922	AU 2003206943	A	20030221	200435
EP 1482875	A1	20041208	EP 2002782913	A	20021015	200480
			WO 2002EP11524	A	20021015	
BR 200215639	A	20041221	BR 200215639	A	20021015	200509

			WO 2002EP11524	A	20021015	
JP 2005519673	W	20050707	JP 2003574082	A	20030221	200545
			WO 2003EP1803	A	20030221	
KR 2005026696	A	20050315	KR 2004714208	A	20040910	200557
JP 2005526550	W	20050908	WO 2002EP11524	A	20021015	200559
			JP 2003574081	A	20021015	
CN 1622793	A	20050601	CN 2002828510	A	20021015	200560
US 20050256579	A1	20051117	US 2003340726	A	20030113	200576
			US 2005188003	A	20050725	

Priority Applications (No Type Date): EP 20025631 A 20020312; EP 20025630 A 20020312; EP 20025632 A 20020312; US 2003349183 A 20030123

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1344507	A1	G	8	A61F-002/44	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
WO 200375803	A1	G		A61F-002/44	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW					
US 20030176923	A1			A61F-002/44	
BR 200303375	A			A61F-002/44	Based on patent WO 200375804
US 20040083000	A1			A61F-002/44	
AU 2002346916	A1			A61F-002/44	Based on patent WO 200375803
AU 2003206943	A1			A61F-002/44	Based on patent WO 200375804
EP 1482875	A1	G		A61F-002/44	Based on patent WO 200375803
Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR					
BR 200215639	A			A61F-002/44	Based on patent WO 200375803
JP 2005519673	W	22		A61F-002/44	Based on patent WO 200375804
KR 2005026696	A			A61F-002/44	
JP 2005526550	W	19		A61F-002/44	Based on patent WO 200375803
CN 1622793	A			A61F-002/44	
US 20050256579	A1			A61F-002/44	Div ex application US 2003340726

Abstract (Basic): EP 1344507 A1

NOVELTY - The **intervertebral prosthesis** has two **cover plates** (1,2) **attached** to adjacent **vertebrae** and a **core** (10). The **core** has limited lateral movement with respect to one cover and forms a joint with the other. The **core** has a joint face (25) to work with the second cover (2). The sliding joint face extends over the same **prosthesis** cross sectional area and prevents the **core** from lifting.

USE - For vertebral **protheses**.

ADVANTAGE - Allows secure retention of **prosthesis core**.

DESCRIPTION OF DRAWING(S) - Drawing shows exploded view of dental **prosthesis**.

Cover plates (1,2)

Core (10)

Joint face (25)

pp; 8 DwgNo 3/8

Title Terms: INTERVERTEBRAL; JOINT; **PROSTHESIS**; SLIDE; SURFACE; EXTEND; WIDTH; **CORE**; PREVENT; LATTER; LIFT

Derwent Class: P32

International Patent Class (Main): **A61F-002/44**

File Segment: EngPI

18/5/29 (Item 29 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011844227 **Image available**
WPI Acc No: 1998-261137/199823
XRPX Acc No: N98-205879

Surgical prosthetic device adapted for placement between two adjoining vertebrae for disk replacement - has two plates with interior surfaces facing each other and being held at distance by connectors and exterior surfaces destined for contacting end plates of two adjoining vertebrae

Patent Assignee: SYNTHES (SYNT-N); SYNTHES AG (SYNT-N)
Inventor: HIGGINS T; PERREN S M
Number of Countries: 019 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9817207	A1	19980430	WO 96EP4567	A	19961021	199823 B
US 6019793	A	20000201	WO 96EP4567	A	19961021	200013
			US 9891350	A	19980617	

Priority Applications (No Type Date): WO 96EP4567 A 19961021

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9817207	A1	E	18	A61F-002/44	
Designated States (National): JP US					
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
US 6019793	A			A61F-002/44	Based on patent WO 9817207

Abstract (Basic): WO 9817207 A

The device is adapted for placement between two adjoining vertebrae for total or partial **replacement** of the **disk** from between them. The device has two plates (1) with interior surfaces (2) facing each other and being held at a distance by connecting members (2), and exterior surfaces (3) destined for contacting the **end plates** of the two adjoining vertebrae.

The connecting numbers (4) are made of a shape-memory alloy. The two plates are also made of shape memory alloy.

ADVANTAGE - Distorted configuration of connecting member (4) has advantage that device has smaller volume below transition temperature and therefore can be more easily introduced in intervertebral space with less damage to body tissues.

Dwg.2,4/5

Title Terms: SURGICAL; **PROSTHESIS** ; DEVICE; ADAPT; PLACE; TWO; ADJOIN; VERTEBRA; **DISC** ; REPLACE; TWO; PLATE; INTERIOR; SURFACE; FACE; HELD; DISTANCE; CONNECT; EXTERIOR; SURFACE; CONTACT; END; PLATE; TWO; ADJOIN; VERTEBRA

Derwent Class: P32

International Patent Class (Main): **A61F-002/44**

International Patent Class (Additional): **A61F-002/46**

File Segment: EngPI

18/5/30 (Item 30 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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009596117 **Image available**

WPI Acc No: 1993-289664/199337

XRPX Acc No: N93-222786

Vertebral disc endoprosthesis with two plates - has joint face in median and frontal sections forming curvature arches of different centre radius

Patent Assignee: LINK GMBH & CO WALDEMAR (LINS)

Inventor: BUETTNER-JANZ K; KELLER A; LEMAIRE J

Number of Countries: 011 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 560141	A1	19930915	EP 93102993	A	19930225	199337 B
DE 4208116	A1	19930923	DE 4208116	A	19920313	199339
US 5401269	A	19950328	US 9328967	A	19930310	199518
DE 4208116	C2	19950803	DE 4208116	A	19920313	199535
EP 560141	B1	19961030	EP 93102993	A	19930225	199648
DE 59304327	G	19961205	DE 504327	A	19930225	199703
			EP 93102993	A	19930225	
ES 2094393	T3	19970116	EP 93102993	A	19930225	199710
JP 3017371	B2	20000306	JP 9352070	A	19930312	200016

Priority Applications (No Type Date): DE 4208116 A 19920313

Cited Patents: DE 3023353; US 4759766

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 560141	A1	G	8	A61F-002/44	
				Designated States (Regional): AT CH DE ES FR GB IT LI SE	
JP 3017371	B2		5	A61F-002/44	Previous Publ. patent JP 6007391
DE 4208116	A1		6	A61F-002/44	
US 5401269	A		8	A61F-002/44	
DE 4208116	C2		6	A61F-002/44	
EP 560141	B1	G	9	A61F-002/44	
				Designated States (Regional): AT CH DE ES FR GB IT LI SE	
DE 59304327	G			A61F-002/44	Based on patent EP 560141
ES 2094393	T3			A61F-002/44	Based on patent EP 560141

Abstract (Basic): EP 560141 A

The **prosthesis plates** (1,2) **connectable** to the **end plates** of the respective **vertebrae**, and a **prosthesis core** (3) coating with joint face permitting rotary motion about vertical axis(9). The curvature radius in the median section is smaller than in the frontal section.

The average curvature radius in one main direction is greater by a factor of 1.5 to 2 than in the transverse main direction. The curvature arches of the joint surface, both in the median and in the frontal section, are of circular shape.

ADVANTAGE - Resistance to twist about the vertical axis without stops at coupling plates.

Dwg.1/15

Title Terms: VERTEBRA; **DISC** ; **ENDOPROSTHESIS** ; TWO; PLATE; JOINT; FACE; MEDIAN; FRONT; SECTION; FORMING; CURVE; ARCH; CENTRE; RADIUS

Derwent Class: P31; P32

International Patent Class (Main): **A61F-002/44**

International Patent Class (Additional): **A61B-017/58**

File Segment: EngPI

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22/5/1 (Item 1 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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016827045 **Image available**

WPI Acc No: 2005-151327/200516

Related WPI Acc No: 2003-228390; 2003-370753; 2003-370754; 2003-540699;
2004-031111; 2004-667699; 2004-667700; 2004-698226; 2005-151326;
2005-305215; 2005-590793; 2005-648864; 2005-657661

XRAM Acc No: C05-048910

XRPX Acc No: N05-127651

Dynamic, modular plate system for use on anterior aspect of cervical spine to provide alignment, stability as an adjunct to fusion of adjacent vertebral bodies comprises plate segments, screw and bone screw lock to couple the plate segments

Patent Assignee: MICHELSON G K (MICH-I)

Inventor: MICHELSON G K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050027298	A1	20050203	US 2001296680	P	20010606	200516 B
			US 2002377916	P	20020503	
			US 2002160247	A	20020604	
			US 2004926734	A	20040826	

Priority Applications (No Type Date): US 2004926734 A 20040826; US 2001296680 P 20010606; US 2002377916 P 20020503; US 2002160247 A 20020604

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050027298	A1	38	A61B-017/56	Provisional application US 2001296680	

Provisional application US 2002377916
Div ex application US 2002160247

Abstract (Basic): US 20050027298 A1

NOVELTY - Dynamic, modular, multilock anterior **cervical** plate system (100) comprising two plate segments (102, 104) attached to one of the adjacent **vertebral** bodies to be fused, at least one fastener (106) e.g. screw and at least one bone screw lock (172), is new. The plate system also has an instrument configured to cooperatively engage the fastener and at least a portion of the plate segments.

DETAILED DESCRIPTION - Dynamic, modular, multilock anterior **cervical** plate system (100) comprising two plate segments (102, 104) attached to one of the adjacent **vertebral** bodies to be fused, at least one fastener (106) e.g. screw and at least one bone screw lock (172), is new. The plate system also has an instrument configured to cooperatively engage the fastener and at least a portion of the plate segments. The plate segments has a concave lower surface contacting at least one of the **cervical vertebral** bodies and at least one bone screw-receiving hole (178) to receive bone screw for attaching the **cervical vertebral** body to the plate. The fastener is detachably attached to plate segments to permit assembly of the first plate segments by the surgeon and complete uncoupling of the plate segments from one another. Movement of the plate segments relative to one another provides for movement of the adjacent **cervical vertebral** bodies toward one another. The plate segments when attached to the adjacent **vertebral** bodies, respectively, maintain a compressive load across a **disc** space between the adjacent **cervical vertebral** bodies. At least a portion of lower surface of the plate segments is roughened to promote the growth of bone.

USE - For applying on human **cervical spine** for contacting the

anterior aspects of at least two **cervical vertebral** bodies to be fused (claimed) to provide alignment and stability as an adjunct to fusion of adjacent **vertebral** bodies where dynamization is highly desired to prevent distraction pseudoarthrosis and to maintain a compressive load across the fusion interfaces.

ADVANTAGE - The plate system has multiple segments, which may be of varying sizes wherein the segments are adapted to be assembled to be adjustable to provide for the size and spacing apart of the **vertebral** bodies to which the plate is to be applied. The plate system segments move relative to one another so that the spacing between the plate segments can be adjusted to correspond to the actual distances between the **vertebral** bodies to be fused in a multi-segment construct for a more precise fit. The height of the **discs** and the **vertebral** bodies may vary level by level even in the same person. Thus, the ability to adjust the distances between the segments of the plates that correspond to the attachments to those **vertebral** bodies allows for a more precise fit of the plate to the **spine** with a reduced inventory of the number of plates required to do so. It is possible to precisely contour each segment **separately**. The system reduces the risk that the plate construct will be discovered to be too short or too long after the attachment process has commenced. It is possible to compress and dynamize levels selectively. The fasteners that link the segments can be tightened to lock the segments after they are compressed or, alternatively, can allow for further motion of the plate segments together. The same hardware can provide for passive dynamization or be rigidly fixed depending on the fasteners used to link plate segments. The system allows for passive dynamization, active dynamization, the combination of passive and active dynamization, or can convert body motion into active dynamization. The ability of the system to allow the plated **spinal** segment to shorten in response to compressive loads allows for the bone portions to be fused to move close together to restore contact. The system is capable of allowing for this passive dynamization while preventing undesirable motions along and around all axes other than the motion along the longitudinal axis of the plate. The plate segments are articulated in such a way that even the movement along the longitudinal axis of the **plate** is selectively **limited** to the desired passive dynamization, that is shortening of the plate construct. This will maintain loaded contact of the bone portions to be fused, and if challenged, resist any forces such as those that would accompany **cervical** extension that would distract or destabilize the construct by elongating it. A further benefit of this is its ability to store and impart a compressive load across the fusion site wherein energy stored in the system shortens the plate construct if conditions permit. The induction of compressive load across **vertebral** bodies to be fused, induces bone growth and when bone resorption occurs at the interface of the graft or **implant** and the **vertebral** bodies to be joined, those **vertebral** bodies are urged to move closer together, thus avoiding the formation of a gap and acts to mitigate against pseudoarthrosis.

DESCRIPTION OF DRAWING(S) - The drawing shows an exploded top perspective view of the plate system.

Cervical plate system (100)

Plate segments (102, 104)

Fastener (106)

Bone screw lock (172)

Bone screw receiving hole (178).

pp; 38 DwgNo 1/46

Title Terms: DYNAMIC; MODULE; PLATE; SYSTEM; ANTERIOR; ASPECT; CERVIX;
SPINE ; ALIGN; STABILISED; ADJUNCT; FUSE; ADJACENT; **VERTEBRA** ; BODY;
COMPRISE; PLATE; SEGMENT; SCREW; BONE; SCREW; LOCK; COUPLE; PLATE;

SEGMENT

Derwent Class: B07; D22; P31
International Patent Class (Main): A61B-017/56
File Segment: CPI; EngPI

22/5/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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016656341 **Image available**
WPI Acc No: 2004-815060/200481
Related WPI Acc No: 2004-784284; 2004-784285; 2005-496492
XRAM Acc No: C04-283891
XRPX Acc No: N04-643001

Artificial intervertebral disc for replacement of damaged disc in spine , comprises housing members with outer surfaces for engaging spaced-apart intervertebral surfaces, bearing mechanism, and a load sharing mechanism

Patent Assignee: SPINAL INNOVATIONS INC (SPIN-N); RICHEL SOPH M (RICH-I)
Inventor: RICHEL SOPH M
Number of Countries: 037 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1475059	A2	20041110	EP 2004252415	A	20040426	200481 B
CA 2466394	A1	20041106	CA 2466394	A	20040505	200481
JP 2004329937	A	20041125	JP 2004136939	A	20040430	200481
US 20040225362	A1	20041111	US 2003430861	A	20030506	200481
AU 2004201685	A1	20041125	AU 2004201685	A	20040423	200506

Priority Applications (No Type Date): US 2003430861 A 20030506

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1475059	A2	E	22	A61F-002/44	
Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR					
CA 2466394	A1	E		A61F-002/44	
JP 2004329937	A		23	A61F-002/44	
US 20040225362	A1			A61F-002/44	
AU 2004201685	A1			A61F-002/44	

Abstract (Basic): EP 1475059 A2

NOVELTY - An artificial **intervertebral disc** comprises housing members including inner surfaces and outer surfaces for engaging spaced-apart **intervertebral** surfaces, a bearing mechanism extending from each inner surface for engaging each other while allowing for low friction and compression resistance and a load sharing mechanism for sharing absorption of compressive loads with the bearing mechanism while limiting the relative movement of housing members.

DETAILED DESCRIPTION - An artificial **intervertebral disc** comprises housing members including spaced inner surfaces facing each other and oppositely facing outer surfaces for engaging spaced-apart **intervertebral** surfaces, a bearing mechanism extending from each inner surface for engaging each other while allowing for low friction and compression resistance relative to each other under compression, and a load sharing mechanism disposed between the inner surfaces and about a portion of the bearing mechanism for sharing absorption of compressive loads with the bearing mechanism while limiting the relative movement of housing members.

USE - For **replacement** of damaged **disc** in **spine** .

ADVANTAGE - The **disc** restores motion to the damaged natural **disc** that allows for motion, cushioning, and dampening.
DESCRIPTION OF DRAWING(S) - The figure is a side exploded view of the inventive **intervertebral disc**.

Housing members (12, 14)

Bearing surfaces (24, 26)

Disc members (28, 30)

Pad members (32, 34)

pp; 22 DwgNo 2/23

Title Terms: ARTIFICIAL; **INTERVERTEBRAL** ; **DISC** ; REPLACE; DAMAGE; **DISC** ; **SPINE** ; COMPRISE; HOUSING; MEMBER; OUTER; SURFACE; ENGAGE; SPACE; APART; **INTERVERTEBRAL** ; SURFACE; BEARING; MECHANISM; LOAD; SHARE; MECHANISM

Derwent Class: A96; D22; P32

International Patent Class (Main): A61F-002/44

International Patent Class (Additional): A61B-017/56; A61L-027/00

File Segment: CPI; EngPI

22/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015309819 **Image available**

WPI Acc No: 2003-370753/200335

Related WPI Acc No: 2003-228390; 2003-370754; 2003-540699; 2004-031111; 2004-667699; 2004-667700; 2004-698226; 2005-151326; 2005-151327; 2005-305215; 2005-590793; 2005-648864; 2005-657661

XRAM Acc No: C03-098171

XRPX Acc No: N03-295664

Plate for anterior human cervical spine to contact anterior aspects of cervical vertebral bodies to be fused together, includes plate segments attached to adjacent vertebral bodies, fasteners, and bone screw locks

Patent Assignee: MICHELSON G K (MICH-I)

Inventor: MICHELSON G K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020183756	A1	20021205	US 2001296060	P	20010604	200335 B
			US 2002355194	P	20020208	
			US 2002160062	A	20020604	

Priority Applications (No Type Date): US 2002160062 A 20020604; US 2001296060 P 20010604; US 2002355194 P 20020208

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020183756	A1	41	A61B-017/56	Provisional application	US 2001296060

Provisional application US 2002355194

Abstract (Basic): US 20020183756 A1

NOVELTY - A plate comprises at least two plate segments attached to adjacent **vertebral** bodies to be fused, fastener(s) to couple together the plate segments and detachably attached to plate segment(s), and bone screw lock(s) to lock to the plate only a single bone screw inserted in one of the bone screw receiving holes.

DETAILED DESCRIPTION - A plate for the anterior human **cervical spine** for contacting the anterior aspects of at least two **cervical vertebral** bodies to be fused together, comprises at least two plate segments (102, 104) attached to adjacent **vertebral** bodies to be

fused, fastener(s) (106) to couple together the plate segments and detachably attached to at least one plate segment to permit assembly of the plate segments by the surgeon and complete uncoupling of the plate segments relative to one another, and bone screw lock(s) to lock to the plate only a single bone screw inserted in one of the bone screw receiving holes (126). The plate segments are connected to one another and at least in part overlapped to form the plate, and in a moveable relationship to one another along a longitudinal axis of the plate. Each plate segment includes a lower surface to contact at least one **cervical vertebral** bodies and an upper surface (118) opposite the lower surface, and bone screw receiving hole(s) extending from the upper surface through the lower surface. Each bone screw receiving hole are adapted to overlies one of the **cervical vertebral** bodies and to receive one bone screw(s) for engaging the **cervical vertebral** body to attach the plate to the **cervical spine**. The lower surface is concave at least in part along at least a portion of the longitudinal axis of the plate. The fastener has a first position to facilitate movement of the plate segments in a direction toward one another along the longitudinal axis of the plate and to resist movement of the first and the second plate segments in a direction away from one another along the longitudinal axis of the plate.

INDEPENDENT CLAIMS are included for:

(1) a method for stabilizing at least two adjacent **vertebral** bodies in the **cervical human spine**, comprising inserting two bone screws through the plate segments of the plate and into **vertebral** bodies adjacent the **disc** space to be fused; locking at least one of the bone screws with bone screw lock(s); and permitting movement of the plate segments attached to the adjacent **vertebral** bodies relative to one another; and

(2) a plate system comprising the inventive plate and an instrument to cooperatively engage the fastener and at least a portion of the plate segment(s) so that upon movement of the fastener with the instrument, the plate segments move relative to one another along the longitudinal axis of the plate.

USE - For the anterior human **cervical spine** for contacting the anterior aspects of at least two **cervical vertebral** bodies to be fused together.

ADVANTAGE - The invention allows overall adjustability of the length of the plate and variations in spacing between the bone screw receiving holes of the plate portions corresponding to the attachment point of the plate to the **vertebral** bodies, avoids or prevents distraction pseudoarthrosis without introducing multidirectional instability, reduces the requisite plate inventory as each plate may cover a range of sizes, reduces the risk that the plate construct will be discovered to be too short or too long after the attachment process has commenced, and allows passive dynamization and/or active dynamization or can convert body motion into active dynamization. The fasteners that link the segments can be tightened to lock the segments after they are compressed or alternatively can allow further motion of the plate segments together. The same hardware can provide for passive dynamization or be rigidly fixed depending on the fasteners.

DESCRIPTION OF DRAWING(S) - The figure shows an exploded top perspective view of a plate, fastener, and a locking element.

Plate segments (102, 104)

Fastener (106)

Head (108)

Shaft (112)

Upper surface (118)

Bone screw receiving holes (126)

Ratchetings (152)

pp; 41 DwgNo 1/41
Title Terms: PLATE; ANTERIOR; HUMAN; CERVIX; **SPINE** ; CONTACT; ANTERIOR;
ASPECT; CERVIX; **VERTEBRA** ; BODY; FUSE; PLATE; SEGMENT; ATTACH; ADJACENT;
VERTEBRA ; BODY; FASTEN; BONE; SCREW; LOCK
Derwent Class: D22; P31
International Patent Class (Main): A61B-017/56
File Segment: CPI; EngPI

22/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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013417207 **Image available**
WPI Acc No: 2000-589145/200056
XRPX Acc No: N00-436010

Intervertebral disc replacement prosthesis , comprises a
cylindrical cage secured using pitch forks located either side in anchor
holes

Patent Assignee: KALAITZIS C (KALA-I); KARAVELIS A (KARA-I)
Inventor: KALAITZIS C; KARAVELIS A
Number of Countries: 025 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1043002	A2	20001011	EP 99600022	A	19991228	200056 B

Priority Applications (No Type Date): GR 100116 A 19990407

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1043002 A2 E 10 A61F-002/44

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI

Abstract (Basic): EP 1043002 A2

NOVELTY - The **prosthesis** comprises of cylindrical cages (2) that
is formed from a medically compliant material such as titanium. Self
tapping external threads (6) are formed on the outer surface of the
cylinder. The cylinder is secured within the **vertebrae** by pitch fork
members , not shown, through **securing** holes (5) located through the
cylinder. The cylinder is inserted within the **intervertebral** space
with a singular tool.

USE - **Intervertebral disc replacement prosthesis**

ADVANTAGE - The use of a singular tool reduces the risk of
collateral damage that may occur during the insertion of the
prosthesis .

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of
the **prosthesis** cylinder and a plan view of the cylinders located
within a **vertebral disc**

Cylindrical cages (2)

Securing holes (5)

External threads (6)

pp; 10 DwgNo 1,8/8

Title Terms: **INTERVERTEBRAL** ; **DISC** ; REPLACE; **PROSTHESIS** ; COMPRISE;
CYLINDER; CAGE; SECURE; PITCH; FORK; LOCATE; SIDE; ANCHOR; HOLE

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

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32/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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017508177 **Image available**

WPI Acc No: 2006-019414/200602

XRPX Acc No: N06-017048

Intervertebral artificial disk implant device, has keel protruding from outer surface of each plate and flange extending along side of each plate

Patent Assignee: ST FRANCIS MEDICAL TECHNOLOGIES LLC (SFRA-N)

Inventor: HSU K Y; KLYCE H A; WINSLOW C J; ZUCHERMAN J F

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050283237	A1	20051222	US 2003524463	P	20031124	200602 B
			US 2004994595	A	20041122	

Priority Applications (No Type Date): US 2003524463 P 20031124; US 2004994595 A 20041122

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20050283237	A1	10	A61F-002/44	Provisional application US 2003524463

Abstract (Basic): US 20050283237 A1

NOVELTY - The device comprises two end plates. A keel protrudes from the outer surface of each plate. A flange (108) extends along the side of each plate.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an intervertebral implant.

USE - Intervertebral artificial disk implant device for replacing intervertebral disk.

ADVANTAGE - The flanges increase the mechanical strength and enables implantation of multiple devices between consecutive intervertebral spaces, thereby allowing securing of more than one device.

DESCRIPTION OF DRAWING(S) - The figure shows of device implanted in consecutive vertebral.

flange (108)
low flange (120)
vertebrae (132-136)
pp; 10 DwgNo 1C/3

Title Terms: INTERVERTEBRAL; ARTIFICIAL; DISC; IMPLANT; DEVICE; KEEL; PROTRUDE; OUTER; SURFACE; PLATE; FLANGE; EXTEND; SIDE; PLATE

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

32/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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017441835 **Image available**

WPI Acc No: 2005-765514/200578

XRAM Acc No: C05-234354

XRPX Acc No: N05-631768

Prosthetic endplate for used in an intervertebral motion disc having anterior end and posterior end, comprises outer plate, inner plate, and mechanism for selectively adjusting position of two plates

Patent Assignee: DEPUY SPINE INC (DEPU-N)

Inventor: CROWE E J; DAVIS K L; ONEIL M; PELLEGRINO R; SERHAN H; SUTTON J K
; SUTTON J

Number of Countries: 110 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050234555	A1	20051020	US 2004826186	A	20040416	200578 B
WO 2005104997	A2	20051110	WO 2005US11795	A	20050408	200578

Priority Applications (No Type Date): US 2004826186 A 20040416

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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US 20050234555	A1		27	A61F-002/44	
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WO 2005104997	A2	E		A61F-002/44	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX
MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR
TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI
SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): US 20050234555 A1

NOVELTY - Prosthetic endplate (1) comprises an **outer plate** (11), inner **plate** (21), and mechanism for selectively adjusting position of the inner **plate** on the **outer plate**. The **outer plate** comprises an **outer surface** (13) adapted for fixation to a first **vertebral body**, an inner surface (15), and a body portion (17). The inner plate comprises an inner surface with a first articulation surface, an outer surface, and a body portion.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(A) a spinal implant comprising an upper surface adapted to bear against an upper vertebral body, a lower surface adapted to bear against a lower vertebral body, and a sensor located upon a surface of the implant; and

(B) an intervertebral motion disc comprising a prosthetic vertebral endplate component, and a core mechanism component, where the core mechanism component comprises a first articulation surface suitable for supporting articulation motion.

The articulation surfaces of the core and endplate are adapted to form an articulation interface. One component is a sensor component comprising a Hall Effect sensor. The other component is a magnetic component comprising a magnet.

USE - Used in an intervertebral motion disc having an anterior end and a posterior end.

ADVANTAGE - The invention can be post-operatively adjusted. It allows surgeon to post operatively reset the center of rotation of the device without having to perform revision surgery.

DESCRIPTION OF DRAWING(S) - The figure shows perspective view of end plate.

End plate (1)
Outer plate (11)
Outer surface (13)
Inner surface (15)
Body portion (17)
Inner plate (21)
Inner surface (23)
Outer surface (25)
Body portion (27)
Recess (33)
Elongated projection (35)

pp; 27 DwgNo 1A/19
Title Terms: PROSTHESIS; INTERVERTEBRAL; MOTION; DISC; ANTERIOR; END;
POSTERIOR; END; COMPRISE; OUTER; PLATE; INNER; PLATE; MECHANISM; SELECT;
ADJUST; POSITION; TWO; PLATE
Derwent Class: A96; B04; D22; P32; S05
International Patent Class (Main): A61F-002/44
International Patent Class (Additional): A61F-002/30
File Segment: CPI; EPI; EngPI

32/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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017378691 **Image available**

WPI Acc No: 2005-702340/200572

Related WPI Acc No: 2003-057306; 2003-057307; 2003-057308; 2003-057309;
2003-057310; 2003-057311; 2003-057312; 2003-149257; 2003-289663;
2003-343296; 2003-343297; 2003-393179; 2003-480453; 2003-876588;
2004-448922; 2004-615080; 2004-625149; 2004-709623; 2004-709624;
2004-728049; 2004-766112; 2005-395333; 2005-604222

XRPX Acc No: N05-576325

**Artificial intervertebral disc for implantation into intervertebral space
between vertebrae, has at least one restoring-force generating piece set
between inner faces of two plates to counter compressive load applied at
plate outer faces**

Patent Assignee: SPINECORE INC (SPIN-N)

Inventor: RALPH J D; TATAR S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050234554	A1	20051020	US 2001968045	A	20011001	200572 B
			US 2002177013	A	20020621	
			US 2005157551	A	20050621	

Priority Applications (No Type Date): US 2002177013 A 20020621; US
2001968045 A 20011001; US 2005157551 A 20050621

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050234554	A1	22		A61F-002/44	CIP of application US 2001968045 Cont of application US 2002177013 CIP of patent US 6740117 Cont of patent US 6918934

Abstract (Basic): US 20050234554 A1

NOVELTY - The disc includes at least one restoring-force generating piece set between the inner faces of two plates (100a,200) to counter the compressive load applied at the plate outer faces. The restoring-force generating piece includes at least one belleville washer (230) having a wide end captured by a retaining wall and a retaining ring, to maintain the wide end next to the inner surface of one of two plates.

DETAILED DESCRIPTION - The belleville washer assumes convex unloaded shape when no load is applied to the plate outer faces, and flat loaded shape when compressive load acts on plate outer faces.

USE - For implantation into intervertebral space between vertebrae.

ADVANTAGE - Ensures stabilization of spine without promoting bone fusion across intervertebral space, while still permitting normal motion. Prevents abnormal distribution of biomechanical stress on patient's spine. Improves gripping and holding strength, upon initial implantation. Allows implanting of disc at any angles. Allows disc to support tension loads.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of the artificial intervertebral disc.

Plates (100a,200)

Post (204)

Ball-shaped head (207)

Belleville washer (230)

pp; 22 DwgNo 9/17

Title Terms: ARTIFICIAL; INTERVERTEBRAL; DISC; IMPLANT; INTERVERTEBRAL; SPACE; VERTEBRA; ONE; RESTORATION; FORCE; GENERATE; PIECE; SET; INNER; FACE; TWO; PLATE; COUNTER; COMPRESS; LOAD; APPLY; PLATE; OUTER; FACE

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

32/5/7 (Item 7 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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017239964 **Image available**

WPI Acc No: 2005-563592/200557

Related WPI Acc No: 2004-707946

XRPX Acc No: N05-462122

Height adjustable vertebral body and disc space replacement device for spinal column has upper and lower disc replacement members, at least one of which has outer surface defining kidney-shaped cross-section

Patent Assignee: BERRY B M (BERR-I)

Inventor: BERRY B M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050187634	A1	20050825	US 2003393464	A	20030320	200557 B
			US 2005107035	A	20050415	

Priority Applications (No Type Date): US 2003393464 A 20030320; US 2005107035 A 20050415

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 20050187634 A1 12 A61F-002/44 Cont of application US 2003393464

Abstract (Basic): US 20050187634 A1

NOVELTY - Upper and lower disc replacement members (430,440) each engaged to a threaded extension of a connection member (412) each has a height adapted to restore a spinal disc space when positioned in the space. At least one of the disc replacement members has ends each sloped relative to a longitudinal axis. At least one of the disc replacement **members** has an **outer** surface defining a kidney-shaped cross-section.

USE - For replacing one or more vertebral bodies in spinal column. For corpectomy and disc replacement procedures.

ADVANTAGE - Supports adjacent vertebrae during fusion.

DESCRIPTION OF DRAWING(S) - The figure is a partially exploded perspective view of the height adjustable vertebral body and disc space replacement device.

Connection member (412)

Upper and lower disc replacement members (430,440)

Coupling member (450)

Engaging member (452)

pp; 12 DwgNo 13/13

Title Terms: HEIGHT; ADJUST; VERTEBRA; BODY; DISC; SPACE; REPLACE; DEVICE; SPINE; COLUMN; UPPER; LOWER; DISC; REPLACE; MEMBER; ONE; OUTER; SURFACE; DEFINE; KIDNEY; SHAPE; CROSS; SECTION

Derwent Class: P32
International Patent Class (Main): A61F-002/44
File Segment: EngPI

32/5/10 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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017181705 **Image available**
WPI Acc No: 2005-505322/200551
XRAM Acc No: C05-153539
XRPX Acc No: N05-412418

Disk prosthesis for use as intervertebral disk replacement for replacing fibro-cartilaginous disk, comprises two plates for attaching to respective vertebrates, and ball and socket joint

Patent Assignee: CARLI O (CARL-I); MOKHTAR M B (MOKH-I)
Inventor: CARLI O; MOKHTAR M B
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050149189	A1	20050707	US 2004865487	A	20040610	200551 B

Priority Applications (No Type Date): FR 200487 A 20040107

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050149189	A1		11	A61F-002/44	

Abstract (Basic): US 20050149189 A1

NOVELTY - A disk prosthesis comprises two plates for attaching to the first and second vertebrates, respectively, and ball and socket joint. A transversal dimension of first plate is greater than a corresponding dimension of second plate to constitute by the inner face of first plate, a limit stop for second plate, and by the outer face of first plate, a bearing surface for vertebrae greater than bearing surface for outer surface of second plate.

DETAILED DESCRIPTION - A disk prosthesis (10) comprises two plates for attaching to the first and second vertebrates (12, 14), respectively, and ball and socket joint (44). A transversal dimension of the first plate (16) is greater than a corresponding dimension of the second plate (18) to constitute by the inner face of the first plate, a limit stop for the second plate, and by the outer face (20, 22) of the first plate, a bearing surface for the vertebrae greater than the bearing surface for the outer surface of the second plate. The ball and socket joint is interposed between the two plates tacked one on top of the other so that the inner faces of the plates are turned towards one another. A ball portion of the ball and socket joint comprises spherical cap cooperating with the socket portion of the joint containing the spherical cup.

USE - For use as intervertebral disk replacement for replacing the fibro-cartilaginous disk.

ADVANTAGE - The invention ensures optimum transmission of thrust of upper vertebra on lower vertebra while offering control of angular clearance between the vertebrae.

DESCRIPTION OF DRAWING(S) - The figure shows a front view of the frontal plane of the prosthesis.

Disk prosthesis (10)
First and second vertebrates (12, 14)
First plate (16)
Second plate (18)

Outer face (20, 22)
Inner faces (24, 26)
Leading edge (36)
Trailing edge (38)
Ball and socket joint (44)
Hole (66, 68)
pp; 11 DwgNo 1/15

Title Terms: DISC; PROSTHESIS; INTERVERTEBRAL; DISC; REPLACE; REPLACE;
CARTILAGE; DISC; COMPRISE; TWO; PLATE; ATTACH; RESPECTIVE; VERTEBRATE;
BALL; SOCKET; JOINT
Derwent Class: A96; D22; P32
International Patent Class (Main): A61F-002/44
File Segment: CPI; EngPI

32/5/11 (Item 11 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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017153800 **Image available**
WPI Acc No: 2005-478145/200548
XRPX Acc No: N05-389234

Intervertebral implant for inserting between adjacent vertebrae, has inner surface which defines articulating surface slidably positioned on support surface of upper end plate and limiter which protrudes from inner surface

Patent Assignee: ST FRANCIS MEDICAL TECHNOLOGIES LLC (SFRA-N)
Inventor: HSU K Y; ZUCHERMAN J F
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050149196	A1	20050707	US 2004534734	P	20040107	200548 B
			US 20044463	A	20041203	

Priority Applications (No Type Date): US 2004534734 P 20040107; US 20044463 A 20041203

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20050149196	A1	11	A61F-002/44	Provisional application US 2004534734

Abstract (Basic): US 20050149196 A1

NOVELTY - The inner surface (114) of a lower end plate defines an articulating surface slidably positioned on the support surface of an upper end plate and a limiter which protrudes from inner surface and confined between two ridge sides. The inner surface of upper end plate defines support surface and a limiting ridge with two ridge sides.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an intervertebral implant improvement.

USE - For inserting between adjacent vertebrae.

ADVANTAGE - Enables forward bending movement and rearward bending movement by sliding upper end plate forward and backward over the articulating surface relative to lower end plate. Enables plate to move relative to each other while confining degree of rotational movement within the desired range by cooperation of limiter and walls of cavity.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of an intervertebral implant.

Inner surface (114)
Keel (116)
Teeth (118)
Anterior surface (130)
Recess (136)
pp; 11 DwgNo 1E/2

Title Terms: INTERVERTEBRAL; IMPLANT; INSERT; ADJACENT; VERTEBRA; INNER;
SURFACE; DEFINE; ARTICULATE; SURFACE; SLIDE; POSITION; SUPPORT; SURFACE;
UPPER; END; PLATE; LIMIT; PROTRUDE; INNER; SURFACE
Derwent Class: P32
International Patent Class (Main): A61F-002/44
File Segment: EngPI

32/5/13 (Item 13 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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017060898 **Image available**
WPI Acc No: 2005-385223/200539
Related WPI Acc No: 2006-046534
XRPX Acc No: N05-312404

**Intervertebral implant for insertion between adjacent vertebral bodies,
includes crossbar spacer positioned between inner surfaces of end plates
which are adapted to mate with vertebral bodies**

Patent Assignee: ST FRANCIS MEDICAL TECHNOLOGIES LLC (SFRA-N)

Inventor: HSU K Y; MITCHELL S T; ZUCHERMAN J F

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050125065	A1	20050609	US 2003517791	P	20031105	200539 B
			US 2003517973	P	20031106	
			US 2004982638	A	20041105	

Priority Applications (No Type Date): US 2004982638 A 20041105; US
2003517791 P 20031105; US 2003517973 P 20031106

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050125065	A1	17	A61F-002/44		Provisional application US 2003517791

Provisional application US 2003517973

Abstract (Basic): US 20050125065 A1

NOVELTY - The intervertebral implant (100) includes a crossbar spacer (130) positioned between the inner surfaces (116,126) of the end plates (110,120). One end plate has an outer surface adapted to mate with a vertebral body. The other end plate is also adapted to mate with another vertebral body. The end plates have keels (114,124) oriented perpendicular to a sagittal plane of the vertebral bodies.

USE - For insertion between adjacent vertebral bodies.

ADVANTAGE - Provides a minimally invasive intervertebral disk replacement that enhances the quality of life of its users. Provides an implant which can respond to the current needs of health care management.

DESCRIPTION OF DRAWING(S) - The figure shows the side view of the implant.

Intervertebral implant (100)

End plates (110,120)

Keels (114,124)

Inner surfaces (116,126)

Crossbar spacer (130)

pp; 17 DwgNo 1B/5

Title Terms: INTERVERTEBRAL; IMPLANT; INSERT; ADJACENT; VERTEBRA; BODY;
CROSSBAR; SPACE; POSITION; INNER; SURFACE; END; PLATE; ADAPT; MATE;
VERTEBRA; BODY

Derwent Class: P32

International Patent Class (Main): A61F-002/44
File Segment: EngPI

32/5/14 (Item 14 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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017049845 **Image available**
WPI Acc No: 2005-374169/200539
Related WPI Acc No: 2005-374168
XRPX Acc No: N05-302369

Implant replacing intervertebral disk, comprising inner core with more intense curvature than inner surface of outer shells

Patent Assignee: ZIMMER GMBH (ZIMV)
Inventor: FILIPPI M; HELLER M; SEEBECK J
Number of Countries: 038 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1532950	A1	20050525	EP 200427322	A	20041117	200539 B
CA 2503294	A1	20050928	CA 2503294	A	20050411	200570
US 20050261772	A1	20051124	US 2005107579	A	20050415	200577
JP 2005329232	A	20051202	JP 2005120606	A	20050419	200579

Priority Applications (No Type Date): DE 102004024662 A 20040518; EP 200326582 A 20031118

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1532950	A1	G	27	A61F-002/44	
Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR YU					
CA 2503294	A1	E		A61F-002/44	
US 20050261772	A1			A61F-002/44	
JP 2005329232	A		26	A61F-002/44	

Abstract (Basic): EP 1532950 A1

NOVELTY - The implant is assembled of two **outer shells** (115, 117) to be inserted between the prepared **vertebrae** and the inner **core** (119) accommodated between them. The **core** (119) is of a lens shape and has two articulation areas (149) differing from the complementary areas (147) located at the inner surfaces of the **outer shells**. The areas positioned at the **core** surface (149) can be designed with a more intense curvature optimizing the shock absorbing quality of the **core** (119) which can be assembled of two parts and/or fitted with a supporting cushion.

USE - The inner core with a more intense curvature level than the inner surface of the **outer shells** is part of an **implant** replacing an **intervertebral disk**.

ADVANTAGE - The performance of the device comes close to the characteristics of a natural intervertebral disk.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross section of the implant.

Outer shells (115, 117)

Core (119)

Articulation areas of outer shells (147)

Articulation areas of core (149)

Bolt (151)

Central axis of core (167)

Central opening (173)

pp; 27 DwgNo 6/12

Title Terms: IMPLANT; REPLACE; INTERVERTEBRAL; DISC; COMPRISE; INNER; CORE;
MORE; INTENSE; CURVE; INNER; SURFACE; OUTER; SHELL
Derwent Class: P32
International Patent Class (Main): A61F-002/44
International Patent Class (Additional): B29C-045/00; B29C-045/14
File Segment: EngPI

32/5/19 (Item 19 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

016766181 **Image available**
WPI Acc No: 2005-090457/200510
XRAM Acc No: C05-030527
XRPX Acc No: N05-079059

Prosthetic intervertebral disc includes central core material, and non-resorbable one piece outer shell
Patent Assignee: HAWKINS J R (HAWK-I)
Inventor: HAWKINS J R
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
US 20050010290 A1 20050113 US 2003608987 A 20030626 200510 B

Priority Applications (No Type Date): US 2003608987 A 20030626

Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
US 20050010290 A1 8 A61F-002/44

Abstract (Basic): US 20050010290 A1

NOVELTY - A prosthetic intervertebral disc comprises a central core material having an upper surface (27), a lower surface, and a sidewall in between, and a non-resorbable one piece **outer shell** having an inner surface surrounding the central **core** and contacting the upper surface, the lower surface and the sidewall of the **core**, where the **outer shell** has an upper wall having an upper surface having a dry coefficient of friction against bone of greater than or equal to 0.5.

USE - The invention is used as a prosthetic intervertebral disc.

ADVANTAGE - The invention allows natural motion between adjacent vertebrae.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the inventive disc.

Outer surface (25)
Upper surface (27)
Radio-opaque marker (51, 53)
pp; 8 DwgNo 1/4

Title Terms: PROSTHESIS; INTERVERTEBRAL; DISC; CENTRAL; CORE; MATERIAL; NON
; RESORPTION; ONE; PIECE; OUTER; SHELL

Derwent Class: A96; D22; P32
International Patent Class (Main): A61F-002/44
File Segment: CPI; EngPI

32/5/21 (Item 21 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

016674725 **Image available**
WPI Acc No: 2004-833445/200482
XRPX Acc No: N04-658723

Spinal column vertebral disc prosthesis for treatment of spinal disc herniation, has shock absorbing core placed within cartridge, and locking mechanism that attaches cartridge to upper and/or lower plates of outer case

Patent Assignee: IMPLIANT LTD (IMPL-N); ARNIN U (ARNI-I); SUDIN Y (SUDI-I); TAUBER M (TAUB-I)

Inventor: ARNIN U; SUDIN Y; TAUBER M

Number of Countries: 107 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040243238	A1	20041202	US 2003474613	P	20030602	200482 B
			US 2003512194	P	20031020	
			US 2003735646	A	20031216	
WO 2004105655	A1	20041209	WO 2003IL1074	A	20031216	200482
AU 2003288494	A1	20050121	AU 2003288494	A	20031216	200526

Priority Applications (No Type Date): US 2003735646 A 20031216; US 2003474613 P 20030602; US 2003512194 P 20031020

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040243238	A1		5	A61F-002/44	Provisional application US 2003474613

Provisional application US 2003512194

WO 2004105655 A1 E A61F-002/44
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

AU 2003288494 A1 A61F-002/44 Based on patent WO 2004105655

Abstract (Basic): US 20040243238 A1

NOVELTY - The prosthesis (10) has an outer case (12) adapted for attachment to spinal structure of a body e.g. vertebrate. The outer case comprising an upper plate and a lower plate with its outer surface attached to the spinal structure of the body. A cartridge (20) is mounted in the outer case, and a shock absorbing core is placed within the cartridge. A locking mechanism attaches the cartridge to the upper and/or lower plates.

USE - Used for treatment of spinal disc herniation.

ADVANTAGE - The prosthesis enables the cartridge to be immediately substituted and locked into position, thus avoiding degeneration of patient's condition. The core is easily replaced incase of material deterioration by releasing locking mechanism and then removing cartridge by simply sliding it out of the outer case.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-sectional view of a spinal disc prosthesis.

Spinal disc prosthesis (10)

Outer case (12)

Upper plate (14)

Lower plate (16)

Cartridge (20)

pp; 5 DwgNo 1/2

Title Terms: SPINE; COLUMN; VERTEBRA; DISC; PROSTHESIS; TREAT; SPINE; DISC; SHOCK; ABSORB; CORE; PLACE; CARTRIDGE; LOCK; MECHANISM; ATTACH; CARTRIDGE; UPPER; LOWER; PLATE; OUTER; CASE

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

32/5/22 (Item 22 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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016607570 **Image available**

WPI Acc No: 2004-766304/200475

XRAM Acc No: C04-268637

XRPX Acc No: N04-604622

Artificial intervertebral disc prosthesis for mimicking physiologic function of normal spinal prosthesis comprises motion-limiting member(s) received in opening(s) of upper/lower endplates and elastomeric cushion disposed between end plates

Patent Assignee: THEKEN DISC LLC (THEK-N)

Inventor: ANANTHAN B; NAVARRO R; THEKEN R; NAVARRO R R; THEKEN R R

Number of Countries: 109 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200489240	A2	20041021	WO 2004US10000	A	20040402	200475 B
EP 1610740	A2	20060104	EP 2004758711	A	20040402	200603
			WO 2004US10000	A	20040402	

Priority Applications (No Type Date): US 2003460613 P 20030404

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200489240 A2 E 70 A61F-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ

UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

EP 1610740 A2 E A61F-007/00 Based on patent WO 200489240

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR

Abstract (Basic): WO 200489240 A2

NOVELTY - An artificial intervertebral disc prosthesis comprises upper and lower (30) endplates having openings (271) for receiving at least one motion-limiting members (80) fitted on each end with an enlarged portion; two projections (270, 370) of end plates terminate to create a gap forming compression stop; and a visco-elastic cushion (40) disposed between the end plates and surrounding the motion-limiting members.

DETAILED DESCRIPTION - The disc prosthesis further comprises force or pressure transducers and microelectronics to provide data to the surgeon or patient regarding load status of disc.

USE - To mimic the physiologic function of normal spinal prosthesis.

ADVANTAGE - The disc prosthesis addresses the detrimental phenomenon of cascading spine syndrome observed in long-term patients with fused-spinal segments. The prosthesis avoids the need for spinal fusion or at least prolongs the need for it. The prosthesis with the motion-limiting members bear high load and preserves the ability of the elastomer to provide substantial motion at low to moderate loads.

The **prosthesis** has the potential to survive high cycle fatigue in bending, compression and shear along all three mutually orthogonal axes. The motion-limiting features survive high load, low cycle fatigue and preserve the integrity of the elastic range performance of the device. The elastomer is not in direct contact with either the motion-limiting members or the two projections to avoid wear and debris problems.

DESCRIPTION OF DRAWING(S) - The figure shows an exploded view of the artificial intervertebral disc prosthesis.

lower endplate (30)
visco-elastic cushion (40)
motion-limiting members (80)
projection of lower endplate (270)
openings (271)
projection of upper endplate. (370)
pp; 70 DwgNo 15/29

Title Terms: ARTIFICIAL; INTERVERTEBRAL; DISC; PROSTHESIS; MIMIC; FUNCTION; NORMAL; SPINE; PROSTHESIS; COMPRISE; MOTION; LIMIT; MEMBER; RECEIVE; OPEN ; UPPER; LOWER; ELASTOMER; CUSHION; DISPOSABLE; END; PLATE

Derwent Class: D22; L02; P32; S02; S05

International Patent Class (Main): A61F-000/00; A61F-007/00

File Segment: CPI; EPI; EngPI

32/5/24 (Item 24 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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016220812 **Image available**

WPI Acc No: 2004-378700/200436

XRAM Acc No: C04-142213

XRPX Acc No: N04-301341

Spinal column prosthesis for bridging a vertebra comprises a joint replacing an intervertebral disk between the bridging part and an outer cover plate

Patent Assignee: LINK GMBH & CO WALDEMAR (LINS)

Inventor: KELLER A; MCAFEE P C

Number of Countries: 030 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1417940	A1	20040512	EP 200225113	A	20021108	200436 B

Priority Applications (No Type Date): EP 200225113 A 20021108

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 1417940	A1	G	8	A61F-002/44	
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Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB

GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

Abstract (Basic): EP 1417940 A1

NOVELTY - Spinal column prosthesis comprises two opposing **outer cover plates** (4, 18) for connecting to two **vertebrae** , and a bridging part (13) for bridging at least one **vertebra** located between the two **vertebrae** . A joint (9, 11) replacing an **intervertebral disk** is provided between the bridging part and at least one of the two **outer cover plates** .

DETAILED DESCRIPTION - Preferred Features: An intervertebral disk replacement joint is arranged between the bridging part and each **outer cover plate** . The bridging part has a holding device (17) for the bridged **vertebra** .

USE - For bridging a vertebra.

ADVANTAGE - The holding device and the rigid connection between the bridging part and the vertebra stabilizes the vertebra, and the vertebra has a stabilizing effect on the prosthesis.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-section through the prosthesis.

outer cover plate (4, 18)
fixing flange (5)
screw hole (6)
joint (9, 11)
bridging part (13)
holding device (17)
pp; 8 DwgNo 1/5

Title Terms: SPINE; COLUMN; PROSTHESIS; BRIDGE; VERTEBRA; COMPRISE; JOINT; REPLACE; INTERVERTEBRAL; DISC; BRIDGE; PART; OUTER; COVER; PLATE

Derwent Class: D22; P32

International Patent Class (Main): A61F-002/44

International Patent Class (Additional): A61F-002/30

File Segment: CPI; EngPI

32/5/26 (Item 26 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015629330 **Image available**

WPI Acc No: 2003-691512/200366

Related WPI Acc No: 2003-691513; 2003-691514; 2003-713054

XRPX Acc No: N03-552471

Intervertebral prosthesis has cover plates attached to adjacent vertebrae with openings for spinal attachment rods

Patent Assignee: LINK GMBH & CO WALDEMAR (LINS); CERVITECH INC (CERV-N)

Inventor: KELLER A; MCAFEE P; MCAFEE P C

Number of Countries: 100 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1344506	A1	20030917	EP 20025630	A	20020312	200366 B
WO 200375803	A1	20030918	WO 2002EP11524	A	20021015	200371
AU 2002346916	A1	20030922	AU 2002346916	A	20021015	200435
EP 1482875	A1	20041208	EP 2002782913	A	20021015	200480
			WO 2002EP11524	A	20021015	
BR 200215639	A	20041221	BR 200215639	A	20021015	200509
			WO 2002EP11524	A	20021015	
KR 2005026696	A	20050315	KR 2004714208	A	20040910	200557
JP 2005526550	W	20050908	WO 2002EP11524	A	20021015	200559
			JP 2003574081	A	20021015	
CN 1622793	A	20050601	CN 2002828510	A	20021015	200560

Priority Applications (No Type Date): EP 20025630 A 20020312; EP 20025631 A 20020312; EP 20025632 A 20020312

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1344506	A1	G	7	A61F-002/44	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
WO 200375803	A1	G		A61F-002/44	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB					

GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
 AU 2002346916 A1 A61F-002/44 Based on patent WO 200375803
 EP 1482875 A1 G A61F-002/44 Based on patent WO 200375803
 Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
 GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
 BR 200215639 A A61F-002/44 Based on patent WO 200375803
 KR 2005026696 A A61F-002/44
 JP 2005526550 W 19 A61F-002/44 Based on patent WO 200375803
 CN 1622793 A A61F-002/44

Abstract (Basic): EP 1344506 A1

NOVELTY - The intervertebral prosthesis has cover plates (10,11) attached to respective vertebrae. the **cover plates** each have a **ventral** fixing flange (25,26) with openings (27) for fixing rods (5). The openings are formed as directionally limited guide slots having non-parallel directions. Locking plates (28,37) are provided to prevent withdrawal of the fixing rods.

USE - For interspinal prostheses.

ADVANTAGE - Allows secure fixing of prosthesis.

DESCRIPTION OF DRAWING(S) - Drawing shows exploded view of prosthesis.

Cover plates (10,11)

Flanges (25,26)

Locking plates (26,37)

pp; 7 DwgNo 3/4

Title Terms: INTERVERTEBRAL; PROSTHESIS; COVER; PLATE; ATTACH; ADJACENT; VERTEBRA; OPEN; SPINE; ATTACH; ROD

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

32/5/27 (Item 27 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015309820 **Image available**

WPI Acc No: 2003-370754/200335

Related WPI Acc No: 2003-228390; 2003-370753; 2003-540699; 2004-031111;
 2004-667699; 2004-667700; 2004-698226; 2005-151326; 2005-151327;
 2005-305215; 2005-590793; 2005-648864; 2005-657661

XRAM Acc No: C03-098172

XRPX Acc No: N03-295665

Anterior cervical plate for contacting anterior aspects of cervical vertebral bodies to be fused together comprises movable plate segments coupled by non-detachable fastener

Patent Assignee: MICHELSON G K (MICH-I)

Inventor: MICHELSON G K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020183757	A1	20021205	US 2001296059	P	20010604	200335 B
			US 2002356318	P	20020212	
			US 2002160086	A	20020604	

Priority Applications (No Type Date): US 2002160086 A 20020604; US 2001296059 P 20010604; US 2002356318 P 20020212

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20020183757	A1	42	A61B-017/56	Provisional application US 2001296059

Abstract (Basic): US 20020183757 A1

NOVELTY - An anterior cervical plate comprises movable plate segments coupled by a non-detachable fastener to prevent complete uncoupling of the plate segments relative to one another.

DETAILED DESCRIPTION - An anterior cervical plate comprises at least a first plate segment (102) adapted to be attached to one of the adjacent vertebral bodies to be fused and at least a second plate segment (104) adapted to be attached to another one of the adjacent vertebral bodies to be fused. The plate segments are adapted to be connected to one another and at least in part overlapped to form the plate. They are in a movable relationship to one another along a longitudinal axis of the plate. Each plate segment includes a lower surface adapted to contact at least one cervical vertebral body and an upper surface (118). The lower surface is concave at least in part along at least a portion of the longitudinal axis of the plate. At least one bone screw receiving hole (126) extends from the upper surface through the lower surface. Each hole is adapted to overlie one of the cervical vertebral bodies and is adapted to receive a bone screw for engaging the cervical vertebral body to attach the plate to the cervical spine. At least one fastener is adapted to couple the plate segments. The fastener is non-detachably attached to at least one of the plate segments to prevent complete uncoupling of the plate segments relative to one another. The fastener has a first position adapted to facilitate movement of the plate segments in a direction toward one another along the longitudinal axis of the plate and to resist movement of the plate segments in a direction away from one another along the longitudinal axis of the plate. At least one bone screw lock is adapted to lock a single bone screw inserted in one of the holes to the plate.

An INDEPENDENT CLAIM is included for a method for stabilizing at least two adjacent vertebral bodies in the cervical human spine by providing an anterior cervical plate; inserting at least a first bone screw through the first plate segment of the plate and into one of the vertebral bodies adjacent to the disc space to be fused; inserting at least a second bone screw through the second plate segment and into the other of the vertebral bodies adjacent the disc space to be fused; locking at least one of the bone screws with at least one bone screw lock adapted to lock to the plate only a single bone screw; and permitting movement of the plate segments attached to the adjacent vertebral bodies relative to one another.

USE - For applying to the anterior human cervical spine for contacting the anterior aspects of at least two cervical vertebral bodies to be fused together (claimed).

ADVANTAGE - The plate of the invention is capable of both passive and active dynamization and the ability to produce the passive dynamization from the active dynamization. It allows for overall adjustability of the length of the plate, allows for variations in spacing between the bone screw receiving holes of the plate portions corresponding to the attachment point of the plate to the vertebral bodies, reduces the requisite plate inventory, and avoids or prevents distraction pseudoarthrosis without itself introducing multi-directional instability.

DESCRIPTION OF DRAWING(S) - The figure shows an exploded top view of a plate, a fastener, and a lock.

First plate segment (102)

Second plate segment (104)

Upper surface (118)

Bone screw receiving hole (126)

Ratchetings (152)

pp; 42 DwgNo 1/41

Title Terms: ANTERIOR; CERVIX; PLATE; CONTACT; ANTERIOR; ASPECT; CERVIX;
VERTEBRA; BODY; FUSE; COMPRISE; MOVE; PLATE; SEGMENT; COUPLE; NON; DETACH
; FASTEN
Derwent Class: D22; P31
International Patent Class (Main): A61B-017/56
File Segment: CPI; EngPI

32/5/28 (Item 28 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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015053689 **Image available**
WPI Acc No: 2003-114205/200311

**Cylindrical cervical disc type prosthesis has a spherical core and two
outer titanium plates simulating human biomechanics - NoAbstract**
Patent Assignee: LOPEZ OLIVA MUNOZ F (MUNO-I)
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
ES 2177391	A1	20021201	ES 20001023	A	20000419	200311 B
ES 2177391	B1	20040816	ES 20001023	A	20000419	200455

Priority Applications (No Type Date): ES 20001023 A 20000419

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
ES 2177391	A1		1	A61F-002/44	
ES 2177391	B1			A61F-002/44	

Title Terms: CYLINDER; CERVIX; DISC; TYPE; PROSTHESIS; SPHERE; CORE; TWO;
OUTER; TITANIUM; PLATE; SIMULATE; HUMAN; NOABSTRACT

Derwent Class: P32
International Patent Class (Main): A61F-002/44
File Segment: EngPI

32/5/29 (Item 29 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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014518636 **Image available**
WPI Acc No: 2002-339339/200237
Related WPI Acc No: 2002-329476; 2005-161978
XRAM Acc No: C02-097394
XRPX Acc No: N02-266873

**Surgical implant useful as intervertebral disc endoprosthesis, for
replacement of diarthroidal or arthroidal joints, in vertebrates,
comprises two rigid opposing shells and deformable, resilient central
body**

Patent Assignee: SPINAL DYNAMICS CORP (SPIN-N); SDGI HOLDINGS INC (SDGI-N);
BRYAN V (BRYA-I); KUNZLER A (KUNZ-I); CLARK C R (CLAR-I); CONTA B
(CONT-I); GIL C E (GILC-I)

Inventor: BRYAN V; CONTA R; KUNZLER A; ROULEAU J; CONTA B; CLARK C R; GIL C
E

Number of Countries: 097 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200211650	A2	20020214	WO 2001US24791	A	20010807	200237 B
US 20020035400	A1	20020321	US 2000223863	P	20000808	200237
			US 2001783910	A	20010213	
AU 200181166	A	20020218	AU 200181166	A	20010807	200244
US 20020128715	A1	20020912	US 2000223863	P	20000808	200262

			US 2001265218	P	20010131	
			US 2001783910	A	20010213	
			US 2001924298	A	20010808	
EP 1363565	A2	20031126	EP 2001959631	A	20010807	200380
			WO 2001US24791	A	20010807	
JP 2004505668	W	20040226	WO 2001US24791	A	20010807	200416
			JP 2002516989	A	20010807	

Priority Applications (No Type Date): US 2001783910 A 20010213; US 2000223863 P 20000808; US 2001265218 P 20010131; US 2001924298 A 20010808

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200211650	A2	E	51	A61F-002/44	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

US 20020035400	A1		A61F-002/44	Provisional application US 2000223863
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AU 200181166	A		A61F-002/44	Based on patent WO 200211650
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US 20020128715	A1		A61F-002/44	Provisional application US 2000223863
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Provisional application US 2001265218

Cont of application US 2001783910

EP 1363565	A2	E	A61F-002/44	Based on patent WO 200211650
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

JP 2004505668	W		83	A61F-002/44	Based on patent WO 200211650
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Abstract (Basic): WO 200211650 A2

NOVELTY - A surgical implant (10) comprises two rigid opposing shells (OS) (40), each having an edge between an outer and inner surfaces; and a deformable, resilient central body (60) disposed between the inner surfaces of OS. The outer surface of OS is adapted to engage bone surfaces of a joint. The friction between the outer surface and bone surface restricts movement of OS relative to bone surface.

DETAILED DESCRIPTION - The inner surfaces of OS are smoother than the outer surfaces. The central body comprises an outer surface having at least one portion shaped to complement and articulate with the shape of the inner surface of rigid opposing shell(s), such that the inner surface of opposing shells and outer surface of central body move easily with respect to each other within a constrained range of motion.

INDEPENDENT CLAIMS are also included for the following:

- (a) a vertebral endoprosthesis;
- (b) bone joint implant;
- (c) method of introducing a lubricant into the implant; and
- (d) system of bone joint implants of varying sizes

USE - As intervertebral disc endoprosthesis, for replacement of diarthroidal or arthroidal joints, or portions of intervertebral disc material, in vertebrates, including humans.

ADVANTAGE - The implant having excellent stability, effectively utilizes soft tissues associated with joints to stabilize the implant and restricts some motion of the joint to the soft tissue. The implant having a simple design, provides effectively sealed, fluid filled capsule, irrespective of the joint being implanted. The implant is safe, enables control and engineering of moving surfaces, potentially generates less wear debris, enables tissue in-growth into the articulating regions of the implant and prevents degeneration of implant material by body fluids. The implant closely approximates the

bio-mechanics and motion of a healthy joint, thus allowing co-ordinating movement of spine and reducing stress on adjacent joints. The rough **outer** surfaces of opposing **shells** provides excellent frictions, hence sufficiently restricts slippage between outer surface and bone surface in the joint. The deformable resilient central body also provides excellent elasticity, mechanical stability, wear resistance and dampening properties, similar to healthy joint tissues. The central body also provides sufficient creep-resistance or resistance to plastic deformation, to avoid post-operative loss of **disc** space height and to maintain appropriate joint geometry. The lubricious central body also provides good tribological properties in junction with inner surfaces of rigid shells. The **implant** can be **implanted** with precision and once **implanted** it is highly stable. The **implant** provide a sealed capsule presenting bio-compatible surfaces to surrounding tissues and keeping wear surfaces internal to the **implant** and permanently lubricated. Hence, the **implant** has extremely high durability, relative to natural **intervertebral disc** material. The **implant** also minimizes or entirely avoids post-operative adjacent level **disc** degeneration, and prevents constrains joint torsion. The **implant** increases likelihood of bony in-growth instead of fibrous tissue formation hence has increased long-term stability.

DESCRIPTION OF DRAWING(S) - The figure shows isometric cross-sectional view of the intervertebral endoprosthesis.

Surgical implant (10)
Rigid opposing shell (40)
Deformable, resilient central body (60)
pp; 51 DwgNo 4/11

Title Terms: SURGICAL; IMPLANT; USEFUL; INTERVERTEBRAL; DISC;
ENDOPROSTHESIS; REPLACE; JOINT; VERTEBRATE; COMPRISE; TWO; RIGID; OPPOSED
; SHELL; DEFORM; RESILIENT; CENTRAL; BODY
Derwent Class: A96; D22; P32
International Patent Class (Main): A61F-002/44
File Segment: CPI; EngPI

32/5/30 (Item 30 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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014470822 **Image available**

WPI Acc No: 2002-291525/200233

Related WPI Acc No: 2003-466091; 2004-030550; 2004-154314; 2004-449481;
2005-404634; 2005-466006; 2005-551315; 2006-064141

XRAM Acc No: C02-085507

XRPX Acc No: N02-227654

Intervertebral disc nucleus pulposus implant for human and animals, has resorbable outer shell surrounding elastic structure sized for introduction into intervertebral disc space

Patent Assignee: SDGI HOLDINGS INC (SDGI-N); TRIEU H H (TRIE-I)

Inventor: TRIEU H H; TRIE H H

Number of Countries: 101 Number of Patents: 010

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020026244	A1	20020228	US 2000650525	A	20000830	200233 B
			US 2001943441	A	20010830	
WO 200217824	A2	20020307	WO 2001US26989	A	20010830	200233
AU 200185351	A	20020313	AU 200185351	A	20010830	200249
WO 200320169	A2	20030313	WO 2002US23919	A	20020725	200328
EP 1313412	A2	20030528	EP 2001964506	A	20010830	200336
			WO 2001US26989	A	20010830	

AU 2002322717	A1	20030318	AU 2002322717	A	20020725	200452
AU 2001285351	B2	20041202	AU 2001285351	A	20010830	200506
AU 2005200342	A1	20050217	AU 2001285351	A	20010830	200517 N
			AU 2005200342	A	20050128	
EP 1313412	B1	20051123	EP 2001964506	A	20010830	200577
			WO 2001US26989	A	20010830	
			EP 200510361	A	20050512	
DE 60115254	E	20051229	DE 115254	A	20010830	200603
			EP 2001964506	A	20010830	
			WO 2001US26989	A	20010830	

Priority Applications (No Type Date): US 2001943441 A 20010830; US 2000650525 A 20000830; AU 2005200342 A 20050128

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020026244	A1		42	A61F-002/44	CIP of application US 2000650525
WO 200217824	A2	E		A61F-002/44	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
AU 200185351	A			A61F-002/44	Based on patent WO 200217824
WO 200320169	A2	E		A61F-002/00	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW					
EP 1313412	A2	E		A61F-002/44	Based on patent WO 200217824
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
AU 2002322717	A1			A61F-002/00	Based on patent WO 200320169
AU 2001285351	B2			A61F-002/44	Previous Publ. patent AU 2001285351
Based on patent WO 200217824					
AU 2005200342	A1			A61F-002/44	Div ex application AU 2001285351
EP 1313412	B1	E		A61F-002/44	Related to application EP 200510361
Related to patent EP 1563808					
Based on patent WO 200217824					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR					
DE 60115254	E			A61F-002/44	Based on patent EP 1313412
Based on patent WO 200217824					

Abstract (Basic): US 20020026244 A1

NOVELTY - A loading bearing elastic structure (15) comprising a hydrogel material and an elastomer is surrounded by an outer resorbable shell (30). The elastic structure is sized for introduction into an intervertebral disc space (20) such that the top and bottom surfaces of the elastic structure contact upper and lower vertebral end plates of the intervertebral disc respectively.

DETAILED DESCRIPTION - The hydrogel material comprises a growth factor having a human protein selected from a group of transforming growth factor beta, bone morphogenetic proteins, fibroblast growth factors, platelet-derived growth factors, insulin like growth factor and their combinations. The elastic structure having projections on its outer surface, has folded and unfolded configurations. In folded configuration, the end portions of the elastic structure are mating

with each other to form elliptical or ring shape and in unfolded configuration, it is inserted into the intervertebral disc space through an opening in an intervertebral disc annulus fibrosis. The elastic structure returns back to the folded configuration after insertion into the intervertebral disc space. The outer surface of the elastic structure is microtextured by a process selected from a group of bead blasting, plasma etching, chemical etching and their combinations. INDEPENDENT CLAIMS are also included for the following: (i) kit for forming intervertebral disc nucleus pulposus implant; (ii) intervertebral disc nucleus pulposus implant implantation method which involves introducing the elastic structure into the intervertebral disc space after preparing the disc space to receive the implant; (iii) spinal disc implant delivery device tip has movable elements whose near end abutting with a far end of a base having a lumen that is sized to receive a nucleus pulposus implant; (iv) spinal disc implant delivery device which comprises a tip and an elongated housing whose far end matingly engaged with the near end of the base. A plunger is arranged in the lumen of the elongated housing. Either the top or bottom wall of the top comprises teeth and one of the side walls of the tip has length greater than other side walls.

USE - Intervertebral disc nucleus implants for humans and animals.

ADVANTAGE - Provides a nucleus pulposus implant that is resistant to migration in and/or expulsion from an intervertebral disc space by surrounding the elastic structure with **outer** resorbable **shell**. The projections on **outer** surface of elastic structure enhances the bonding between the outer surface of the **implant** and the resorbable shell. The **implants** are configured to allow extensive short term manual or other deformation without permanent deformation, cracks, tears, breakage or other damage.

DESCRIPTION OF DRAWING(S) - The figure shows a cross-sectional view of intervertebral disc nucleus pulposus implant.

Loading bearing elastic structure (15)

Intervertebral disc space (20)

Outer resorbable shell (30)

pp; 42 DwgNo 1/49

Title Terms: INTERVERTEBRAL; DISC; NUCLEUS; IMPLANT; HUMAN; ANIMAL;

RESORPTION; OUTER; SHELL; SURROUND; ELASTIC; STRUCTURE; SIZE; INTRODUCING
; INTERVERTEBRAL; DISC; SPACE

Derwent Class: A96; D22; P32

International Patent Class (Main): A61F-002/00; A61F-002/44

File Segment: CPI; EngPI

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40/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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010762563 **Image available**

WPI Acc No: 1996-259518/199626

XRPX Acc No: N96-218370

Temporary fastening plate implant for securing bone portions - comprises single plate with stop surfaces defining bone portion separation , or pair of lockable plates allowing relative adjustment

Patent Assignee: DUFOUR G (DUFO-I); KEHAYAN G (KEHA-I); KEHYAYAN G (KEHY-I)

Inventor: DUFOUR G; KEHYAYAN G

Number of Countries: 018 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9614802	A1	19960523	WO 95FR1483	A	19951110	199626 B
FR 2726755	A1	19960515	FR 9413570	A	19941110	199627
EP 784454	A1	19970723	EP 95940299	A	19951110	199734
			WO 95FR1483	A	19951110	
EP 784454	B1	19990623	EP 95940299	A	19951110	199929
			WO 95FR1483	A	19951110	
DE 69510462	E	19990729	DE 610462	A	19951110	199936
			EP 95940299	A	19951110	
			WO 95FR1483	A	19951110	
ES 2135785	T3	19991101	EP 95940299	A	19951110	199953

Priority Applications (No Type Date): FR 9413570 A 19941110

Cited Patents: 02 21328300; 02 67635300; 8100048

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 9614802	A1	F 22	A61B-017/80	
			Designated States (National):	US
			Designated States (Regional):	AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
EP 784454	A1	F	A61B-017/80	Based on patent WO 9614802
			Designated States (Regional):	AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE
EP 784454	B1	F	A61B-017/80	Based on patent WO 9614802
			Designated States (Regional):	AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE
DE 69510462	E		A61B-017/80	Based on patent EP 784454
				Based on patent WO 9614802
ES 2135785	T3		A61B-017/80	Based on patent EP 784454
FR 2726755	A1		A61B-017/68	

Abstract (Basic): WO 9614802 A

At least one implant (1) is secured to the two bone portions (4a,b), and includes stop surfaces (6a,b) against which the edges of the bone portions bear with a predetermined separation (a) defined by the spacing of the stop surfaces.

The implant may be formed as a pair of sub-components (11,13), each secured to one of the bone portions and secured to each other by intermediate fasteners in one of a range of different relative positions. One sub-component may include a longitudinal slot (17) defining a slideway for the other sub-component, with a locking screw (15) securing them in a required relative position.

ADVANTAGE - Simple, secure adjustment allowing use for range of situations or fine adjustment in situ.

Dwg.1,3/12

Title Terms: TEMPORARY; FASTEN; PLATE; IMPLANT; SECURE; BONE; PORTION; COMPRISE; SINGLE; PLATE; STOP; SURFACE; DEFINE; BONE; PORTION; SEPARATE;

PAIR; LOCK; PLATE; ALLOW; RELATIVE; ADJUST
Derwent Class: P31
International Patent Class (Main): A61B-017/68 ; A61B-017/80
File Segment: EngPI
?

36/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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017239962 **Image available**
WPI Acc No: 2005-563590/200557
Related WPI Acc No: 2005-505977; 2005-562027
XRPX Acc No: N05-462120

Prosthetic device for spinal stabilization in human body, has tether for providing time-dependent degree of resistance to at least one predetermined type of relative directional motion between plates

Patent Assignee: SDGI HOLDINGS INC (SDGI-N)
Inventor: ALLARD R N; GIL C E; MARIK G; TRIEU H H; VAN HOECK J E
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050187631	A1	20050825	US 2004765260	A	20040127	200557 B
			US 2004830247	A	20040422	
			US 200596385	A	20050401	

Priority Applications (No Type Date): US 200596385 A 20050401; US 2004765260 A 20040127; US 2004830247 A 20040422

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050187631	A1	22	A61F-002/44		CIP of application US 2004765260 CIP of application US 2004830247

Abstract (Basic): US 20050187631 A1

NOVELTY - Plates (14,16) are **separately** connected to adjacent **vertebrae** (V1,V2). A tether (104) provides a time-dependent degree of resistance to at least one predetermined type of relative directional motion e.g. left or right side bending, left or right rotation, medial lateral left or right translation, anterior-posterior translation, posterior-anterior translation between the plates.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (A) a **prosthetic** system; and
- (B) an application method.

USE - For **spinal** stabilization in human body.

ADVANTAGE - Includes tether that provides time-dependent degree of resistance, which allows person to recuperate from **spinal** surgery and slowly progress into surgical or biomechanical equilibrium without jeopardizing any desired initial stability that disc and tether are designed to provide.

DESCRIPTION OF DRAWING(S) - The figure is an anterior section view of a **prosthetic** system.

Plates (14,16)

Tether (104)

Vertebrae (V1,V2)

pp; 22 DwgNo 9/12

Title Terms: **PROSTHESIS** ; DEVICE; **SPINE** ; STABILISED; HUMAN; BODY; TETHER ; TIME; DEPEND; DEGREE; RESISTANCE; ONE; PREDETERMINED; TYPE; RELATIVE; DIRECTION; MOTION; PLATE

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

36/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

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016827044 ****Image available****

WPI Acc No: 2005-151326/200516

Related WPI Acc No: 2003-228390; 2003-370753; 2003-370754; 2003-540699;
2004-031111; 2004-667699; 2004-667700; 2004-698226; 2005-151327;
2005-305215; 2005-590793; 2005-648864; 2005-657661

XRAM Acc No: C05-048909

XRPX Acc No: N05-127650

Plate system used in anterior aspect of cervical spine to provide alignment and stability to adjacent vertebral bodies has plate having plate segments to be respectively attached to respective vertebral body to be fused

Patent Assignee: MICHELSON G K (MICH-I)

Inventor: MICHELSON G K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050027297	A1	20050203	US 2001296060	P	20010604	200516 B
			US 2002355194	P	20020208	
			US 2002160062	A	20020604	
			US 2004925857	A	20040825	

Priority Applications (No Type Date): US 2004925857 A 20040825; US 2001296060 P 20010604; US 2002355194 P 20020208; US 2002160062 A 20020604

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050027297	A1	37	A61B-017/56	Provisional application	US 2001296060

Provisional application US 2002355194
Div ex application US 2002160062

Abstract (Basic): US 20050027297 A1

NOVELTY - A plate system having a plate with first and second plate segments to be respectively attached to respective **vertebral** body to be fused, is new. The plate segments are to be connected to one another and in part overlapped to form the plate. They are in a moveable relationship to one another on a longitudinal axis of the plate. Each plate segment has lower surface to contact the **cervical vertebral** body and an upper surface.

DETAILED DESCRIPTION - A plate system includes a plate (100) to be applied to an anterior human **cervical spine** for contacting anterior aspects of **cervical vertebral** bodies to be fused; bone screw receiving hole (126); fastener (106); bone screw lock; and an instrument. The plate includes first plate segment (102) to be attached to adjacent **vertebral** body to be fused and a second plate segment (104) to be attached to another adjacent **vertebral** body to be fused. The first and second plate segments are to be connected to one another and in part overlapped to form the plate. They are in a moveable relationship to one another on a longitudinal axis of the plate. Each plate segment includes lower surface to contact the **cervical vertebral** body and an upper surface opposite the lower surface. The lower surface is concave in part on a portion of the longitudinal axis of the plate. The bone screw receiving hole extends from the upper surface through the lower surface. Each bone screw receiving hole overlies the **cervical vertebral** body and receive a bone screw for engaging the **cervical vertebral** body to attach the plate to the **cervical spine**. The fastener is adapted to couple together the plate segments. It is detachably attached to the plate segments to permit assembly of the segments by the surgeon and complete uncoupling of the plate segments from one another. It has a first position to permit the

plate segments to move relative to one another along the longitudinal axis of the plate. The bone screw lock is adapted to lock to the plate such that only a single bone screw inserted in one of the bone screw receiving hole. The instrument engages the fastener and a portion of the plate segments so that upon movement of the fastener with the instrument the plate segments move relative to one another along the longitudinal axis of the plate.

USE - Used in anterior aspect of **cervical spine** to provide alignment and stability to adjacent **vertebral** bodies.

ADVANTAGE - The plating system reduces the requisite plate inventory as each plate may cover a range of sizes; precisely contours each segment **separately** ; reduces the risk that the **plate** construct will be discovered to be too short or too long after the attachment process has commenced; and compresses and dynamizes levels selectively. The fasteners that link the segments can be tightened to lock the segments after they are compressed or, alternatively, can allow for further motion of the plate segments together. The same hardware can provide for passive dynamization or be rigidly fixed depending on the fasteners used to link plate segments. The plate system can allow for passive dynamization and/or active dynamization, or can convert body motion into active dynamization.

DESCRIPTION OF DRAWING(S) - The figure is an exploded top perspective view of plate, fastener, and locking element.

Plate (100)
Plate segment (102, 104)
Fastener (106)
Head (108)
Shaft (112)
Thread (116)
Bone screw receiving hole (126).
pp; 37 DwgNo 1/41

Title Terms: PLATE; SYSTEM; ANTERIOR; ASPECT; CERVIX; **SPINE** ; ALIGN;
STABILISED; ADJACENT; **VERTEBRA** ; BODY; PLATE; PLATE; SEGMENT; RESPECTIVE
; ATTACH; RESPECTIVE; **VERTEBRA** ; BODY; FUSE
Derwent Class: B07; D22; P31
International Patent Class (Main): A61B-017/56
File Segment: CPI; EngPI

36/5/15 (Item 15 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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015341855 **Image available**

WPI Acc No: 2003-402793/200338

Related WPI Acc No: 2003-402792; 2003-568876; 2004-247806

XRPX Acc No: N03-321377

Adjustable bone fusion implant for adjacent bone structures, such as adjacent vertebrae , has discrete reinforcing member removably positioned between plates

Patent Assignee: FACISZEWSKI T (FACI-I); MEDICINELODGE INC (MEDI-N)

Inventor: FACISZEWSKI T; FALLIN W T; GERBEC D E; FALLIN T W

Number of Countries: 100 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030074064	A1	20030417	US 2001981674	A	20011017	200338 B
			US 2002121630	A	20020412	
US 6562074	B2	20030513	US 2001981674	A	20011017	200339
			US 2002121630	A	20020412	
WO 200332812	A2	20030424	WO 2002US32972	A	20021016	200353

AU 2002348443 A1 20030428 AU 2002348443 A 20021016 200461

Priority Applications (No Type Date): US 2002121630 A 20020412; US 2001981674 A 20011017

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030074064	A1		39	A61F-002/28	CIP of application US 2001981674
US 6562074	B2			A61F-002/28	CIP of application US 2001981674
WO 200332812	A2	E		A61B-000/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

AU 2002348443 A1 A61F-002/28 Based on patent WO 200332812

Abstract (Basic): US 20030074064 A1

NOVELTY - A discrete reinforcing member is removably positioned between plates. A coupler connects the plates such that the **plates** can be selectively and manually **separated** to one or more predefined positions, and such that the plates are mechanically stopped from collapsing toward each other once separated to one or more predefined positions.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) an adjustable bone fusion **implant** kit; and

(b) a method for fusing two adjacent bones or pieces of bone.

USE - For adjacent bone structures, such as adjacent **vertebrae**.

ADVANTAGE - Recreates natural curvature of the **spine** by reproducing the wedge shaped **intervertebral** space, and concurrently allows installation from the narrow side of the **intervertebral** space.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of the adjustable bone fusion **implant** in assembled state.

pp; 39 DwgNo 1/35

Title Terms: ADJUST; BONE; FUSE; **IMPLANT**; ADJACENT; BONE; STRUCTURE; ADJACENT; **VERTEBRA**; DISCRETE; REINFORCED; MEMBER; REMOVE; POSITION; PLATE

Derwent Class: P32

International Patent Class (Main): A61B-000/00; A61F-002/28

File Segment: EngPI

36/5/16 (Item 16 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015341854 **Image available**

WPI Acc No: 2003-402792/200338

Related WPI Acc No: 2003-402793; 2003-568876; 2004-247806

XRPX Acc No: N03-321376

Adjustable bone fusion implant for adjacent bone structures, such as adjacent vertebrae, has discrete reinforcing member compressed between plates by application of compressive force between plates

Patent Assignee: FACISZEWSKI T (FACI-I); MEDICINELODGE INC (MEDI-N); MOVDICE HOLDING INC (MOVD-N)

Inventor: FACISZEWSKI T; FALLIN W T; GERBEC D E; FALLIN T W

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030074063	A1	20030417	US 2001981674	A	20011017	200338	B
US 6648917	B2	20031118	US 2001981674	A	20011017	200376	
AU 2002348443	A1	20030428	AU 2002348443	A	20021016	200461	

Priority Applications (No Type Date): US 2001981674 A 20011017; US 2002121630 A 20020412

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030074063	A1		22	A61F-002/28	
US 6648917	B2			A61F-002/44	
AU 2002348443	A1			A61F-002/28	Based on patent WO 200332812

Abstract (Basic): US 20030074063 A1

NOVELTY - A discrete reinforcing member is selectively inserted between plates such that application of compressive force between the plates causes the reinforcing member to be compressed between the plates. The interior face of one plate faces the interior face of the other plate to form a compartment (8) between the interior faces.

DETAILED DESCRIPTION - A mechanical coupler mechanically connects the plates such that the plates can be selectively and manually separated so as to enlarge the size of the compartment. INDEPENDENT CLAIMS are also included for the following:

- (a) a method for fusing two adjacent bones or pieces of bone; and
- (b) a method for fusing two vertebrae .

USE - For adjacent bone structures, such as adjacent vertebrae .

ADVANTAGE - Selectively fuses bones or pieces of bone together. Recreates natural curvature of the spine by reproducing the wedge shaped intervertebral space, and concurrently allows installation from the narrow side of the intervertebral space.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of the adjustable bone fusion implant in assembled state.

Compartment (8)

pp; 22 DwgNo 1/16

Title Terms: ADJUST; BONE; FUSE; IMPLANT ; ADJACENT; BONE; STRUCTURE; ADJACENT; VERTEBRA ; DISCRETE; REINFORCED; MEMBER; COMPRESS; PLATE; APPLY; COMPRESS; FORCE; PLATE

Derwent Class: P32

International Patent Class (Main): A61F-002/28; A61F-002/44

File Segment: EngPI

36/5/23 (Item 23 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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012901158 **Image available**

WPI Acc No: 2000-072994/200006

XRPX Acc No: N00-057044

Surgical implant for use between vertebrae to support bone graft material

Patent Assignee: SURGICRAFT LTD (SURG-N)

Inventor: EVANS S L; UPADHYAY S

Number of Countries: 022 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9963913	A2	19991216	WO 99GB1778	A	19990604	200006	B
AU 9941585	A	19991230	AU 9941585	A	19990604	200022	

Priority Applications (No Type Date): GB 9812103 A 19980605

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9963913 A2 E 16 A61F-002/44

Designated States (National): AU JP KR US

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU

MC NL PT SE

AU 9941585 A A61F-002/44 Based on patent WO 9963913

Abstract (Basic): WO 9963913 A2

NOVELTY - Two telescopic members (10,12) have flanges (14,34) adapted to secure on the **vertebrae** and can be adjusted to a desired spacing during a mutual telescopic engagement. The telescopic members have teeth (44) to oppose the flange movement when being engaged. Fixing screws (50) passing through slots (30), hold the teeth in a mutual engagement state when being engaged in an inner screw-threaded aperture.

USE - For use between **vertebrae** to support bone graft material used in growth of new bone.

ADVANTAGE - Enables securing telescopic members to respective **vertebrae** through provision of flanges, without the need to provide a separate stabilizing plate. Improves security of joint between flanges and **vertebrae**, since flanges abut and bite against surface of **vertebrae** when placing telescopic members between **vertebrae**.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of a surgical **implant**.

Telescopic members (10,12)

Flanges (14,34)

Slots (30)

Teeth (44)

Fixing screws (50)

pp; 16 DwgNo 1/7

Title Terms: SURGICAL; **IMPLANT**; **VERTEBRA**; SUPPORT; BONE; GRAFT; MATERIAL

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

36/5/30 (Item 30 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008842420 **Image available**

WPI Acc No: 1991-346436/199147

XRPX Acc No: N91-265287

Axially-fixed vertebral body prosthesis - comprises upper and lower end plates separated by support columns or posts

Patent Assignee: UNIV FLORIDA (UYFL)

Inventor: HAID R; MACMILLAN M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5062850	A	19911105	US 90465419	A	19900116	199147 B

Priority Applications (No Type Date): US 90465419 A 19900116

Abstract (Basic): US 5062850 A

The **vertebral body prosthetic** device comprises an upper endplate and a lower endplate, each endplate having a height, length

and width to completely fit within a **spinal** column defect created when a **vertebral** body is surgically removed. Each endplate is provided with at least a first and a second hole extending through the height of the endplate.

Support columns separate the endplates, each support column connecting to the lower surface of the upper endplate and the upper surface of the lower endplate. One fixation screw is insertable into the first hole in the upper endplate and another fixation screw is insertable into the first hole of the lower endplate. When the device is inserted into a **spinal** column and the fixation screws are inserted into the first holes, the fixation screws are positioned approximately parallel to the axis of the **spinal** column.

USE - For replacing a surgically removed natural **vertebral** body.

(8pp Dwg.No.3/3)

Title Terms: AXIS; FIX; **VERTEBRA** ; BODY; **PROSTHESIS** ; COMPRISE; UPPER; LOWER; END; PLATE; SEPARATE; SUPPORT; COLUMN; POST
Derwent Class: P32
International Patent Class (Additional): A61F-002/44
File Segment: EngPI

36/5/32 (Item 32 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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004410925

WPI Acc No: 1985-237803/198539

XRPX Acc No: N85-177890

Spinal curvature correction implant - has sliding clamp on bar with plate spring combinations

Patent Assignee: FRAUNHOFER-GES FORD ANGE (FRAU)

Inventor: HARMS J; NEUGEBAUER J

Number of Countries: 012 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3434753	A	19850919	DE 3434753	A	19840921	198539 B
WO 8504096	A	19850926	WO 85DE83	A	19850314	198540
EP 173725	A	19860312	EP 85901363	A	19851004	198611
DE 3434753	C	19861204				198649

Priority Applications (No Type Date): DE 3409353 A 19840314; DE 3434753 A 19840921

Cited Patents: 1.Jnl.Ref; CH 581988; DE 2708866; DE 2821678; DE 3021238; DE 3229313; FR 2349321; SU 485739

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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DE 3434753	A		13		
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WO 8504096	A	G			
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Designated States (National): JP US

Designated States (Regional): AT BE CH DE FR GB LU NL SE

EP 173725	A	G			
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Designated States (Regional): AT BE CH DE FR GB LI LU NL SE

Abstract (Basic): DE 3434753 A

On a bar (1) sits a freely sliding hook (2) and a clamp piece (5) which can slide coaxially on the bar (1) and be fixed in place by a screw (8). Between the clamp piece (5) and the hook (2) is a **plate** spring combination (3) made of **separate** elements.

The spring combination (3) is surrounded by a protection tube (6) to shield the surrounding tissue from the spring. The other end of the

bar (1) from the sliding hook (2) end is tapered and accepts a hook (7) which is secured against rotation. A tensioning tool is used to put the spring combination (3) under tension. The distraction force exerted by the spring is virtually constant over a longer part of the spring length.

USE - **Implant** for **spinal** curvature correction.

1/2

Title Terms: **SPINE** ; CURVE; CORRECT; **IMPLANT** ; SLIDE; CLAMP; BAR; PLATE; SPRING; COMBINATION

Derwent Class: P31; P32

International Patent Class (Additional): A61B-017/56

File Segment: EngPI

?

Set	Items	Description
S1	35874	ENDPLATE? OR BASEPLATE? OR COVERPLATE? OR (COVER?? OR COVERING? OR END OR BASE)()PLATE? ?
S2	1285457	CORE OR CORES OR DISC OR DISCS OR DISK OR DISKS OR DISCUS - OR MENISCUS
S3	91629	SECURE? ? OR SECURING
S4	4478267	LIMIT??? OR STOP OR STOPS OR STOPP??? OR RESTRICT?
S5	5390352	OUTER OR OVER OR VENTRAL? OR DORSAL?
S6	2716283	PLATE OR PLATES OR MEMBER? ? OR SHELL? ? OR SHEET? ? OR PANEL? ?
S7	2650979	UNCONNECT? OR DISCONNECT? OR SEPARAT?
S8	4166780	COUPL??? OR ATTACH? OR CONNECT? OR SECUR??? OR JOIN OR JOINED OR JOINING OR FASTEN??? OR ENGAG???
S9	13975854	SPINE? OR SPINAL? OR VERTEBRA? OR INTERVERTEBRA? OR CERVICAL? OR LUMBAR?
S10	1715840	PROSTHE? OR IMPLANT? OR ENDOPROSTHE? OR REPLACEMENT? OR ARTHROPLAST?
S11	43989	S3:S5(3N)S6
S12	2	S9 AND S10 AND S11 AND S1 AND S2
S13	2	RD (unique items)
S14	27	S9 AND S10 AND S11 AND S1:S2
S15	25	S14 NOT S13
S16	20	RD (unique items)
S17	1541021	SPINE? OR SPINAL? OR VERTEBRA? ? OR VERTEBRAL? OR INTERVERTEBRA? OR CERVICAL? OR LUMBAR?
S18	95	S17 AND S10 AND S11
S19	64	S17(S)S10(S)S11
S20	51	S19 NOT (S13 OR S14)
S21	31	RD (unique items)
S22	14918	S17(5N)S10
S23	18981	S6(5N)(S7 OR "NOT"(3N)S8)
S24	1	S22 AND S23
S25	7	S17 AND S10 AND S23
S26	6	S25 NOT (S24 OR S13 OR S14)
S27	4	RD (unique items)
S28	323	S6(5N)S8(5N)S17
S29	103	S28 AND S10
S30	71	S28(S)S10
S31	69	S30 NOT (S24 OR S13 OR S14 OR S26)
S32	46	RD (unique items)
S33	7	S28 AND S10 AND S1 AND S2
S34	7	S33 NOT (S24 OR S13 OR S14 OR S26)
S35	4	RD (unique items)
S36	28	S28 AND S10 AND S1:S2
S37	18	S36 NOT (S24 OR S13:S14 OR S26 OR S34)
S38	12	RD (unique items)
S39	55	S6(5N)S3(5N)S17
S40	14	S39 AND S10
S41	13	S40 NOT (S24 OR S13:S14 OR S26 OR S34 OR S37)
S42	10	RD (unique items)
S43	32	S32 NOT (S24 OR S13:S14 OR S26 OR S34 OR S37)
S44	4038	S6(5N)ANCHOR?
S45	22	S44 AND S10 AND S17
S46	15	S45 NOT (S24 OR S13:S14 OR S26 OR S34 OR S37 OR S43)
S47	14	RD (unique items)

? show files; logoff hold

File 155:MEDLINE(R) 1951-2006/Feb 27

(c) format only 2006 Dialog

File 5:Biosis Previews(R) 1969-2006/Feb W3

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File 73:EMBASE 1974-2006/Feb 27

(c) 2006 Elsevier Science B.V.
File 35:Dissertation Abs Online 1861-2006/Feb
(c) 2006 ProQuest Info&Learning
File 65:Inside Conferences 1993-2006/Feb W4
(c) 2006 BLDSC all rts. reserv.
File 34:SciSearch(R) Cited Ref Sci 1990-2006/Feb W3
(c) 2006 Inst for Sci Info
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info
File 94:JICST-EPlus 1985-2006/Dec W1
(c)2006 Japan Science and Tech Corp(JST)
File 144:Pascal 1973-2006/Feb W1
(c) 2006 INIST/CNRS
File 23:CSA Technology Research Database 1963-2006/Feb
(c) 2006 CSA.

13/5/1 (Item 1 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

15025315 PMID: 14569859

[Injuries of the lower cervical vertebrae --the monocortical stabilization technique]

Poraneni dolni krcni patere--monokortikalni technika stabilizace.

Stulik J; Krbec M; Vyskocil T

Spondylochirurgicke centrum FN Motol, Praha.

Acta chirurgiae orthopaedicae et traumatologiae Cechoslovaca (Czech Republic) 2003, 70 (4) p226-32, ISSN 0001-5415 Journal Code: 0407123

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: CZECH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

PURPOSE OF THE STUDY: In contrast to the thoracolumbal spine, the cervical spine bears a lower biomechanical load and, therefore, anterior stabilization of a fracture is a definitive procedure in the majority of cases. What remains the matter of choice is screw fixation in the body of the vertebra involved. This may be either monocortical or bicortical. In this study, we evaluate a group of patients in whom fractures of the lower cervical spine were treated using the CSLP monocortical system (Synthes). MATERIAL: We included 68 patients in whom complete radiographic data were available and the surgery was performed more than 6 months earlier. This group comprised 49 men and 19 women with the mean age of 37.6 years and range of 12 to 79 years. In the first stage, all patients were operated on from the anterior approach. In 11 (16.2%) patients with type B or C injury, according to the AO classification, the procedure was completed by dorsal stabilization. The definite indication for surgery was any involvement of nerve structures or open fractures; kyphosis greater than 15 degrees, reduction by more than 50% of the proximal edge of the vertebral body, narrowing of the spinal canal by more than 50%, multiple wedge fractures and disc and ligament injuries associated with instability were considered conditional indications. METHODS: Any locked dislocation was reduced manually under X-ray guidance in the shortest possible time. Subluxations or fractures of the vertebral body were reduced by positioning the patient's body on the operating table. The standard procedure for subluxation management was distraction of the segment by applying a Caspar's distractor and subsequent microscopic discectomy up to the posterior longitudinal ligament. A tricortical bone graft was collected from the iliac crest. After its implantation, the distractor was released and the segment was fixed by a CSLP system (Synthes) with monocortical screws 14 mm long, usually used in a 2 + 2 configuration. In locked dislocation, in addition, the discission of the posterior longitudinal ligament and inspection of the dural sac were performed, and completed by dorsal stabilization with hook plates or a Cervifix fixator (Synthes) in one procedure under anesthesia. When the body of the vertebra was fractured, either partial or subtotal excision of it was carried out according to the type of fracture or when displaced fragments protruded into the spinal canal. A tricortical graft taken from the iliac crest was larger than in the treatment of subluxation but a plate was applied as in monosegmental fixation. In addition, the graft was fixed with special screws that had a porous surface and holes in the shank. Dorsal stabilization with hook plates or a Cervifix fixator was used for severe instability in type B or C injury. RESULTS: The normal range of cervical spine motion (flexion, extension, inclination, rotation) was

found in 44 patients. Slightly limited movement (75% to 90% normal motion) was in 17 patients and seven were affected more seriously (50% to 75% normal motion). Of the 19 patients with neurological deficit, 13 showed improvement by 1, 2 or 3 grades of Frankel's classification in seven, four and two patients, respectively. The first signs of bone remodeling between the graft and **covering plate**, usually at the distal graft border, were found in 16 patients at 6 weeks and in the remaining 52 patients at 12 weeks. By 6 months postoperatively, all patients showed complete healing and incorporation of the tricortical graft. The cranial screws broke in one case (1.5%) but this had no effect on the treatment outcome. No complication related to the surgical procedure occurred intraoperatively. DISCUSSION: The very good results achieved with the use of the CSLP monocortical system in this study (98.5% fusion without broken screws or plates) are in agreement with relevant data reported in the Czech and foreign literature. The principal condition is a careful preparation of both the **endplates** of **vertebral** bodies and the graft. After insertion, this should stay in place without any tendency to extrude. If the graft is too long, it imposes an increased load on plates or screws that consequently act ventrally. CONCLUSION: Our experience and literature data suggest that the CSLP monocortical system is fully capable to stabilize the lower **cervical spine** after injury, supposing all procedures described above are completed. In more serious trauma and type B or C instability, the additional dorsal instrumented fusion is indicated.

Tags: Female; Male

Descriptors: ***Cervica** 1 **Vertebrae** --injuries--IN; * **Cervical Vertebrae** --surgery--SU; *Fracture Fixation--methods--MT; *Internal Fixators; * **Spinal** Fractures--surgery--SU; Adolescent; Adult; Aged; Child; Fracture Fixation--instrumentation--IS; Humans; Middle Aged; Postoperative Complications

Record Date Created: 20031022

Record Date Completed: 20031106

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16/5/6 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0014515803 BIOSIS NO.: 200300484522
Intervertebral disc **nucleus implants and methods**
AUTHOR: Trieu Hai H (Reprint)
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1274 (3): Sep. 16, 2003 2003
MEDIUM: e-file
PATENT NUMBER: US 6620196 PATENT DATE GRANTED: September 16, 2003 20030916
PATENT CLASSIFICATION: 623-1716 PATENT ASSIGNEE: SDGI Holdings, Inc.
PATENT COUNTRY: USA
ISSN: 0098-1133 (ISSN print)
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Nucleus pulposus **implants** that are resistant to migration in and/or expulsion from an **intervertebral disc** space are provided. In one form of the invention, an **implant** includes a load bearing elastic body surrounded in the **disc** space by an anchoring, preferably resorbable, **outer shell**. In certain forms of the invention, the elastic body is surrounded by a supporting member, such as a band or jacket, and the supporting member is surrounded by the **outer shell**. Kits for forming such **implants** are also provided. In another form of the invention, an **implant** is provided that has locking features and optional shape memory characteristics. In yet another aspect of the invention, nucleus pulposus **implants** are provided that have shape memory characteristics and are configured to allow short-term manual, or other deformation without permanent deformation, cracks, tears, breakage or other damage. Methods of forming and **implanting** the **implants** are also described.

DESCRIPTORS:

MAJOR CONCEPTS: Biomedical Engineering--Allied Medical Sciences; Methods and Techniques; Orthopedics--Human Medicine, Medical Sciences

METHODS & EQUIPMENT: **intervertebral disc nucleus implantation** method--clinical techniques, therapeutic and prophylactic techniques; **intervertebral disc nucleus implants -- prosthetic**

CONCEPT CODES:

10511 Biophysics - Bioengineering

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

16/5/11 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0013412696 BIOSIS NO.: 200200006207
Threaded fusion cage anchoring device and method
AUTHOR: Ray Charles D
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1251 (4): Oct. 23, 2001 2001
MEDIUM: e-file
PATENT NUMBER: US 6306170 PATENT DATE GRANTED: October 23, 2001 20011023
PATENT CLASSIFICATION: 623-1711 PATENT ASSIGNEE: Tegementa, L.L.C.,
Williamsburg, VA, USA PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent

RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The present disclosure is directed to an anchoring device and system for stabilizing adjacent **vertebral** joints. The anchoring device includes an anchoring **plate** adapted to be **secured** to at least one **vertebral disc** having a central portion, extended ends portions and at least one lateral extension. The central portion includes an anchoring nut for fastening the anchoring plate to a **vertebral implant** and the end portions include anchoring screws for fastening the anchoring plate to the at least one **vertebral disc**. The **vertebral implant** is preferably a threaded fusion cage, wherein the anchoring nut is rotatably fixed to both the anchoring plate and the threaded fusion cage. The anchoring device preferably includes the central portion and each extended end portion having at least one locking tab for rotatably locking the anchoring nut and anchoring screws. Additionally, the central portion further includes a plurality of projecting detents along an outer periphery thereof which mate with corresponding slots on the threaded fusion cage. The present disclosure is also directed to a method of **implanting a vertebral implant**.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment, Apparatus, Devices and Instrumentation;
Methods and Techniques; Surgery--Medical Sciences

METHODS & EQUIPMENT: anchoring nut--medical equipment; anchoring screws--medical equipment; threaded fusion cage anchoring device--medical equipment; **vertebral implant implanting** method--surgical method, therapeutic method; **vertebral joint stabilizing method--therapeutic method**

CONCEPT CODES:

12512 Pathology - Therapy

16/5/14 (Item 9 from file: 5)

DIALOG(R) File 5: Biosis Previews(R)
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0013206181 BIOSIS NO.: 200100378020

Anterior spinal instrumentation and method for implantation and revision

AUTHOR: Michelson Gary K (Reprint); Boyd Lawrence M .

AUTHOR ADDRESS: 438 Sherman Canal, Venice, CA, 90281, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1243 (3): Feb. 20, 2001 2001

MEDIUM: e-file

PATENT NUMBER: US 6190388 PATENT DATE GRANTED: February 20, 2001 20010220

PATENT CLASSIFICATION: 606-61 PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A system and method for anterior fixation of the **spine** utilizes a cylindrical **implant** engaged in the a intradiscal space at the cephalad and caudal ends of the construct. The **implants** are cylindrical fusion devices (10) filled with bone material to promote bone ingrowth and fusion of the **disc** space. An attachment member (40) is connected to each of the fusion devices (10) and bone screws (30) having similar attachment members (33) are engaged in the **vertebral** bodies of the intermediate **vertebrae**. A **spinal** rod (50) is connected to each of the

attachment members using an eyebolt assembly (53, 54, 55). In a further inventive method, a revision of the construct is achieved by removing the fusion devices. Each fusion device is engaged by an elongated guide member (62) over which a cylindrical trephine (70) is advanced. The trephine (70) has an inner diameter larger than the diameter of the fusion implant and includes cutting teeth (72) for extracting a core (84) of bone material around the fusion implant. The trephine (70) and guide member (62) are removed along with the bone core (84) containing the fusion implant (10). The trephine (70) is also used to extract a bone dowel from a solid bone mass to be inserted into the space left by the removed bone core (84).

DESCRIPTORS:

MAJOR CONCEPTS: Orthopedics--Human Medicine, Medical Sciences; Surgery--Medical Sciences

METHODS & EQUIPMENT: anterior spinal instrumentation--surgical method, therapeutic method; anterior spinal instrumentation implantation method--surgical method, therapeutic method; anterior spinal instrumentation revision method--surgical method, therapeutic method

CONCEPT CODES:

00532 General biology - Miscellaneous

?

21/5/11 (Item 11 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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08420477 PMID: 3194791

Posterior plating of the cervical spine. A biomechanical comparison of different posterior fusion techniques.

Gill K; Paschal S; Corin J; Ashman R; Bucholz R W
Division of Orthopaedic Surgery, University of Texas Southwestern Medical Center, Dallas.

Spine (UNITED STATES) Jul 1988, 13 (7) p813-6, ISSN 0362-2436
Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

Posterior arthrodesis is a preferred treatment for posttraumatic instability of the **cervical spine**. While most surgical constructs yield predictably high rates of fusion in satisfactory alignment, certain injury patterns involving fractures of the lamina or spinous processes may preclude rigid immobilization by simple wiring techniques. Plate fixation of the posterolateral masses has been advocated for such injuries. The purpose of this biomechanical study was to test the relative stiffness provided by different posterior fusion constructs, including lateral mass plating. All testing was performed on fresh, unembalmed cadaveric **spines** divided into two **vertebral** segment units. Muscular tissue was stripped from the specimens, but all discal and ligamentous structures were preserved. Four different posterior fixation constructs were tested. These included 1) Rogers interspinous wiring, 2) Halifax laminar clamps, 3) bilateral 1/3 tubular plates on the lateral masses, using unicortical screws, and 4) bilateral 1/3 tubular plates on the lateral masses, using bicortical screws. Stiffness measurements were taken in both flexion and extension on all specimens. Yield strength and fatigue strength of the **spines** were not measured. It was found that 1/3 tubular plates secured with bicortical screws to the lateral masses provided the highest mean stiffness. Less stiffness was found in **spines** stabilized by Halifax clamps, interspinous wiring, and plates secured with unicortical screws. There was, however, no statistically significant difference in stiffness provided by any of these four **implants**. It was concluded that there is no advantage in **plate** fixation over standard fusion constructs in augmenting the stiffness of posterior fixation of the **cervical spine**.

Tags: Comparative Study; Research Support, Non-U.S. Gov't

Descriptors: *Bone Plates; *Spinal Fusion--methods--MT; *Spine --physiopathology--PP; Biomechanics; Humans; Movement; Neck; Orthopedic Fixation Devices

Record Date Created: 19890112

Record Date Completed: 19890112

21/5/14 (Item 2 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
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0015798596 BIOSIS NO.: 200600143991

Implant for bone connector

AUTHOR: Shirado Osamu; Oribe Kazuya; Takamido Hiroshi

AUTHOR ADDRESS: Hokkaido, Japan**Japan

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents MAR 1 2005 2005

PATENT NUMBER: US 06860884 PATENT DATE GRANTED: March 01, 2005 20050301
PATENT CLASSIFICATION: 606-61 PATENT ASSIGNEE: Showa Ika Kohgyo Co., Ltd.
PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: An implant for a bone connector includes an implant body, a hook portion, a fixing clamp and a movable clamp. The fixing clamp has a curved shape and supports a vertebral arch of a vertebra by grasping the vertebral arch. The implant body is provided on an upper portion of the fixing clamp. The hook portion **over** which a connecting **member** is hooked is provided on an upper portion of the **implant** body. Further, the movable clamp, which has a curved shape and grasps the **vertebral** arch, is provided on the upper portion of the **implant** body and is disposed to be opposed to the fixing clamp.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment Apparatus Devices and Instrumentation;
Orthopedics--Human Medicine, Medical Sciences

METHODS & EQUIPMENT: bone connector implant--medical equipment

CONCEPT CODES:

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

21/5/15 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0015017462 BIOSIS NO.: 200400388251

Apparatus for fusing adjacent bone structures

AUTHOR: Castro Michael (Reprint)

AUTHOR ADDRESS: Seymour, CT, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1285 (5): Aug. 31, 2004 2004

MEDIUM: e-file

PATENT NUMBER: US 6783547 PATENT DATE GRANTED: August 31, 2004 20040831

PATENT CLASSIFICATION: 623-1716 PATENT ASSIGNEE: Howmedica Corp.,
Allendale, NJ, USA PATENT COUNTRY: USA

ISSN: 0098-1133 (ISSN print)

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: An apparatus for facilitating fusion of adjacent vertebral portions includes an implant member dimensioned for positioning between adjacent vertebral portions and defining a longitudinal axis. The implant **member** includes an **outer member** having an exterior wall defining an internal cavity and a clip receiving opening subtending a peripheral portion of the exterior wall, an inner member telescopically received within the internal cavity of the **outer member** to permit relative movement of the **outer** and inner **members** and a locking clip dimensioned for at least partial reception within the clip receiving opening of the **outer member**. The inner **member** includes an exterior wall defining an internal cavity and having a plurality of locking slots spaced along the longitudinal axis. The locking clip includes a clip base and locking clip legs depending from opposed ends of the clip base. The locking clip legs are dimensioned for reception within corresponding

locking slots of the inner **member** to selectively **secure** a relative position of the **outer** and inner **members** to establish a predetermined height of the **implant** member.

DESCRIPTORS:

MAJOR CONCEPTS: Biomedical Engineering--Allied Medical Sciences;
Orthopedics--Human Medicine, Medical Sciences; Surgery--Medical
Sciences

ORGANISMS: PARTS ETC: bone--skeletal system; vertebrae--skeletal system

METHODS & EQUIPMENT: apparatus for fusing adjacent bone structures--
surgical instrument; bone fusion--clinical techniques, therapeutic and
prophylactic techniques; implant--prosthetic

CONCEPT CODES:

10511 Biophysics - Bioengineering

11105 Anatomy and Histology - Surgery

12512 Pathology - Therapy

18004 Bones, joints, fasciae, connective and adipose tissue - Physiology
and biochemistry

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

21/5/19 (Item 7 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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0014479150 BIOSIS NO.: 200300447869

Surgical implant

AUTHOR: Collins Simon Nicholas (Reprint); Fletcher David Mark

AUTHOR ADDRESS: Gloucestershire, UK**UK

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1274 (1): Sep. 2, 2003 2003

MEDIUM: e-file

PATENT NUMBER: US 6613053 PATENT DATE GRANTED: September 02, 2003 20030902

PATENT CLASSIFICATION: 606-69 PATENT ASSIGNEE: Corin Limited, Cirencester,
UK PATENT COUNTRY: USA

ISSN: 0098-1133 (ISSN print)

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A surgical implant, typically a cervical plate assembly, comprises a plate having at least two apertures and two screw threaded fastening devices for **securing** the **plate** to bone. Each aperture in the plate has an annular groove intermediate opposite ends of the aperture and each fastening device comprises an outer screw and an inner plug. The screw has a head at one end, a tip at the other end, an externally threaded shank between the head and the tip and an internal bore extending axially through the head and at least part way into the shank for receiving the inner plug. The head comprises a plurality of resiliently deformable fingers separated by one another by axially extending slits. Each finger has an outwardly projecting rib extending circumferentially of the head intermediate opposite ends of the finger for snap fit engagement in the annular groove of a respective plate aperture. The inner plug is arranged so that when it is inserted into the internal bore of the screw it will prevent contraction of the head of the screw thereby preventing the ribs disengaging from the groove.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment Apparatus Devices and Instruments; Orthopedics
--Human Medicine, Medical Sciences; Surgery--Medical Sciences

METHODS & EQUIPMENT: annular groove--medical equipment; assembly aperture

--medical equipment; bone screw--medical equipment; cervical plate assembly--medical equipment; screw threaded fastening device--medical equipment; surgical implant--medical equipment

CONCEPT CODES:

11105 Anatomy and Histology - Surgery
12512 Pathology - Therapy
18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

21/5/22 (Item 10 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013743891 BIOSIS NO.: 200200337402

Segmented linked intervertebral implant systems

AUTHOR: Stone Corbett W; Marino James F

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1258 (2): May 14, 2002 2002

MEDIUM: e-file

PATENT NUMBER: US 6387130 PATENT DATE GRANTED: May 14, 2002 20020514

PATENT CLASSIFICATION: 623-1716 PATENT ASSIGNEE: NuVasive, Inc.

PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A method of positioning a plurality of intervertebral implants in a patient's intervertebral space, comprising: introducing an elongated member into the patient's intervertebral space; and sequentially advancing a plurality of intervertebral implants over the elongated member and into the patient's intervertebral space, the plurality of intervertebral implants each having at least one hole passing therethrough, with the elongated member received through the holes passing through each of the plurality of implants .

DESCRIPTORS:

MAJOR CONCEPTS: Biomedical Engineering--Allied Medical Sciences;
Equipment, Apparatus, Devices and Instrumentation; Orthopedics--Human Medicine, Medical Sciences

METHODS & EQUIPMENT: segmented linked intervertebral implant systems--prosthetic

CONCEPT CODES:

10511 Biophysics - Bioengineering

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

21/5/23 (Item 11 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013714932 BIOSIS NO.: 200200308443

Spinal implant and method

AUTHOR: Rogozinski Chaim

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1257 (5): Apr. 30, 2002 2002

MEDIUM: e-file

PATENT NUMBER: US 6379354 PATENT DATE GRANTED: April 30, 2002 20020430

PATENT CLASSIFICATION: 606-61 PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: An apparatus, method and system for treating **spinal** conditions by moving or spatially fixing at least one **vertebra** relative to another **vertebra** . The invention includes a link member the ends of which are configured to be secured to adjacent **vertebrae** and which are offset from a central portion of the link member. The link members can be in the form of a C-shaped or V-shaped rod or plate to form the offset. The offset provides increased bone volume that can be used for grafts or fusion. Attachment structure in the form of bone screws, bolts, or hook members are provided to secure the link members to respective **vertebrae** or other bones. A plurality of link members can be connected in chain-like fashion to connect multiple points on a plurality of **vertebrae** or other bones even though those points are nonlinear. In another aspect of the invention, a multi-directional attachment member is provided and may be used with the link members to form a **spinal implant** or external bone fixation system.

DESCRIPTORS:

MAJOR CONCEPTS: Methods and Techniques; Neurology--Human Medicine, Medical Sciences; Skeletal System--Movement and Support; Surgery--Medical Sciences

METHODS & EQUIPMENT: spinal implant--prosthetic; spinal implant method--surgical method

CONCEPT CODES:

12512 Pathology - Therapy

18004 Bones, joints, fasciae, connective and adipose tissue - Physiology and biochemistry

20506 Nervous system - Pathology

21/5/24 (Item 12 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013552548 BIOSIS NO.: 200200146059

Apparatus, method and system for the treatment of spinal conditions and fixation of pelvis and long bones

AUTHOR: Rogozinski Chaim

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1254 (2): Jan. 8, 2002 2002

MEDIUM: e-file

PATENT NUMBER: US 6336927 PATENT DATE GRANTED: January 08, 2002 20020108

PATENT CLASSIFICATION: 606-61 PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: An apparatus, method and system for treating **spinal** conditions by moving or spatially fixing at least one **vertebra** relative to another **vertebra** . The invention includes a link member the ends of which are configured to be secured to adjacent **vertebrae** and which are offset from a central portion of the link member. The link members can be in the form of a C-shaped or V-shaped rod or plate to form the offset. The offset provides increased bone volume that can be used for grafts or fusion. Attachment structure in the form of bone screws, bolts, or hook members are provided to secure the link members to respective **vertebrae** or other bones. A plurality of link members can be connected in

chain-like fashion to connect multiple points on a plurality of **vertebrae** or other bones even though those points are nonlinear. In another aspect of the invention, a multi-directional attachment member is provided and may be used with the link members to form a **spinal implant** or external bone fixation system.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment, Apparatus, Devices and Instrumentation;
Orthopedics--Human Medicine, Medical Sciences; Surgery--Medical
Sciences

METHODS & EQUIPMENT: orthopedic device--medical equipment

CONCEPT CODES:

12512 Pathology - Therapy

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

21/5/25 (Item 13 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013322307 BIOSIS NO.: 200100494146

Multi-axial bone anchor system

AUTHOR: Morrison Matthew M (Reprint); Barker B Thomas; Young John Stewart;
Beale Jeffrey W; Johnson Chris E

AUTHOR ADDRESS: Cordova, TN, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1249 (4): Aug. 28, 2001 2001

MEDIUM: e-file.

PATENT NUMBER: US 6280445 PATENT DATE GRANTED: August 28, 2001 20010828

PATENT CLASSIFICATION: 606-61 PATENT ASSIGNEE: SDGI Holdings, Inc.

PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A spinal implant system is disclosed for the fixation of bone segments in the spine. The system includes an elongated member, one or more bone anchor assemblies, and stabilizer members which are fitted within the elongated member. A bone anchor is attached to a bone, and the elongated member and stabilizer are fitted over the bone anchor. A rounded washer and nut having a corresponding rounded underside surface are fitted on to the bone anchor **over** the elongated **member**, and tightened. The configuration of the bone anchor assembly, including an intermediate portion of the bone anchor, the arcuate washer, and the nut, along with the configuration of the sliding support, allows multi-axial positioning of the bone anchor with respect to the elongated member at a plurality of locations along a slotted member.

DESCRIPTORS:

MAJOR CONCEPTS: Biomedical Engineering--Allied Medical Sciences;
Equipment, Apparatus, Devices and Instrumentation; Orthopedics--Human
Medicine, Medical Sciences

ORGANISMS: PARTS ETC: bone--skeletal system

METHODS & EQUIPMENT: multi-axial bone anchor system--prosthetic

CONCEPT CODES:

00532 General biology - Miscellaneous

?

38/5/2 (Item 1 from file: 5)
DIALOG(R) File 5: Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0015057103 BIOSIS NO.: 200400427892

Method and apparatus for intervertebral implant anchorage

AUTHOR: Williams Lytton A (Reprint); Watkins Robert G

AUTHOR ADDRESS: 72 Dapplegray La., Rolling Hills Estates, CA, 90274, USA**
USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1287 (1): Oct. 5, 2004 2004

MEDIUM: e-file

PATENT NUMBER: US 6800092 PATENT DATE GRANTED: October 05, 2004 20041005

PATENT CLASSIFICATION: 623-1711 PATENT COUNTRY: USA

ISSN: 0098-1133 (ISSN print)

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Methods and devices are provided for intervertebral **implant** anchorage. An **implantable** device for insertion into an intradiscal section between adjacent vertebrae is provided. The **implantable** device includes at least one anchor plate which comprises a plate member sized to be positioned within an intradiscal section between adjacent vertebrae and a plurality of anchoring elements extending from a surface of the plate member, each anchoring element including a distal portion capable of being introduced into the **vertebra** through the **vertebral end plate**; and an intradiscal component **coupled** to the anchor **plate**.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment Apparatus Devices and Instrumentation; Methods and Techniques; Orthopedics--Human Medicine, Medical Sciences; Surgery --Medical Sciences

BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGANISMS: human (Hominidae)

COMMON TAXONOMIC TERMS: Animals; Chordates; Humans; Mammals; Primates; Vertebrates

METHODS & EQUIPMENT: intervertebral **implant** anchorage--clinical techniques, therapeutic and prophylactic techniques; intervertebral **implant** anchorage apparatus--medical equipment, surgical instrument

CONCEPT CODES:

11105 Anatomy and Histology - Surgery

12512 Pathology - Therapy

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

BIOSYSTEMATIC CODES:

86215 Hominidae

38/5/10 (Item 1 from file: 34)
DIALOG(R) File 34: SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

12271850 Genuine Article#: 748AF Number of References: 34

Title: Influence of connecting plate on construct stiffness of spinal implants and motion of adjacent segments

Author(s): Lin SJ; Chen PQ; Wu SS; So H (REPRINT)

Corporate Source: Natl Taiwan Univ, Dept Mech Engn, Taipei 106//Taiwan/ (REPRINT); Natl Taiwan Univ, Dept Mech Engn, Taipei 106//Taiwan/; Natl Taiwan Univ, Dept Orthoped Surg, Taipei 106//Taiwan/; Triserv Gen

Hosp, Dept Orthoped Surg, Taipei 106//Taiwan/
Journal: JOURNAL OF THE CHINESE INSTITUTE OF ENGINEERS, 2003, V26, N6 (NOV)
, P809-816

ISSN: 0253-3839 Publication date: 20031100

Publisher: CHINESE INST ENGINEERS, #1, 4TH FL, SEC 2, JEN-AI RD, TAIPEI
10019, TAIWAN

Language: English Document Type: ARTICLE

Geographic Location: Taiwan

Journal Subject Category: ENGINEERING, MULTIDISCIPLINARY

Abstract: An in vitro biomechanical study compared the influence of **connecting plates** on construct stiffness and motion of adjacent segments. Twelve porcine **lumbar spines** were destabilized by laminectomy and instrumented at the L3 and L4 vertebrae by one of three transpedicular screw fixation systems: Cotrel-Dubousset, Diapason, and a newly designed **implant** (FPI).

The current study demonstrated that connecting plates significantly increased the construct compression and flexion stiffness and added resistance to axial rotation. The upper intact **disc** had greater rotational displacement than the unfixed intact spine, but the lower intact **disc** had more anterior translational displacement. When the construct was flexed with a 1-second period, the upper intact **disc** (L2/L3) flexed much more than with a 5-second period ($P < 0.05$). This study also showed a significant correlation between flexion stiffness and compensatory rotational displacement at the upper intact **disc**.

Descriptors--Author Keywords: spinal **implant** ; cross-linkage ; loading rate ; adjacent segment ; stiffness

Identifiers--Keyword Plus(R): ANTERIOR CERVICAL FUSION; TERM FOLLOW-UP; BIOMECHANICAL ANALYSIS; INSTRUMENTATION SYSTEMS; LUMBAR FUSION; FAILURE MODES; FATIGUE LIFE; THORACOLUMBAR; IMMOBILIZATION; FREQUENCY

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WEINHOFER SL, 1995, V20, P526, SPINE

38/5/11 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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08949054 Genuine Article#: 347JN Number of References: 9

Title: A new surgical technique for lumbosacral stabilization: arthrodesis using the pedicle screw fixation. A clinical study of 5 cases

Author(s): Meheust P (REPRINT)

Corporate Source: CLIN VET BEAULIEU, 18 RUE GAETAN RONDEAU/F-44200
NANTES//FRANCE/ (REPRINT)

Journal: PRATIQUE MEDICALE ET CHIRURGICALE DE L ANIMAL DE COMPAGNIE, 2000
, V35, N3 (MAY-JUN), P201-207

ISSN: 0758-1882 Publication date: 20000500

Publisher: CNVSPA-CONF NATL VETERINAIRES SPECIALISES PETITS ANIMAUX, 40 RUE
DE BERRI, 75008 PARIS, FRANCE

Language: French Document Type: ARTICLE

Geographic Location: FRANCE

Journal Subject Category: VETERINARY SCIENCES

Abstract: A pedicle screw fixation technique was used on five cases of lumbosacral instability undergoing surgery. This technique uses the vertebral pedicle as an **implantation** site for the material. The assembly is a simple one using 4 pedicle screws: 2 monoaxial screws located "straight ahead" in the L7 sacral pedicles and 2 polyaxial screws located in the sacral pedicles parallel to the **vertebral end - plate** of the sacrum. The **lumbar** screw is **connected** by a rod to the ipsilateral sacral screw. A clinical and radiographical follow-up period of six months minimum was performed on the dogs that underwent surgery. The assembly did not induce or aggravate any pain, neither did it elicit any functional impediment. The use of pedicle screws did not produce any complications. The radiographical followup did not reveal any loosening of the **implant**. Both the perfect tolerance of the material and the absence of any osteoarthrotic development are proof of excellent stability.

Descriptors--Author Keywords: spine ; lumbosacral stabilization ; vertebral pedicle ; vertebral fracture dislocation ; cauda equina syndrome

Identifiers--KeyWord Plus(R): FRACTURE LUXATIONS; DOGS

Cited References:

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43/5/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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14944459 PMID: 12942002

Mechanical performance of the new posterior spinal implant : effect of materials, connecting plate , and pedicle screw design.

Chen Po-Quang; Lin Son-Jyh; Wu Shing-Sheng; So Hon
Department of Orthopedic Surgery, National Taiwan University, Taipei,
Taiwan 10660, Republic of China.

Spine (United States) May 1 2003, 28 (9) p881-6; discussion 887,
ISSN 1528-1159 Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

STUDY DESIGN: A newly designed spinal implant was tested to evaluate multicycle stiffness and fatigue resistance. OBJECTIVES: To investigate the effect of different materials, **connecting plate** , and pedicle screw design on the mechanical performance of the **spinal implant** . SUMMARY OF THE BACKGROUND DATA: The addition of cross-linkages did not significantly increase **implant** compression/flexion stiffness, but accelerated fatigue failure at the rod junctions. Both Ti-6Al-4V spinal **implants** and the 316L stainless-steel counterparts have been used extensively for clinical cases; however, design factors establishing the proposed superiority of the Ti-6Al-4V **implant** for fatigue resistance have not, as yet, been extensively studied. METHODS: Twenty **implants** with connecting plates (two materials by two screw designs by five **implants**) and five **implants** without connecting plates were assembled to UHMWPE blocks and cyclically loaded from 60 N to 600 N at a frequency of 5 Hz. RESULTS: Failure sites for the tested prototypes were at the cephalic screw hubs or rod-plate junctions. All Ti-6Al-4V **implants** demonstrated reduced stiffness compared to the structurally identical 316L analogs. The use of connecting plates raised the stiffness of the 316L prototypes without cross-links. However, elimination of the connecting plate avoided stress concentration at the rod/plate junctions and increased fatigue life. The Ti-6Al-4V new system with the minimal notch effect at the screw hubs achieved greater fatigue resistance than its 316L counterpart. By contrast, enlargement of the inner-hub diameter resulted in greater gains for fatigue resistance than for stiffness, especially for Ti-6Al-4V variants. CONCLUSIONS: Although Ti-6Al-4V was superior to 316L for endurance-limit properties, structural design of the Ti-6Al-4V **implant** dramatically affects fatigue resistance. This may explain the differences between existing studies and the current report, comparing fatigue life for **implants** made from these two materials. Our results reveal that Ti-6Al-4V must be carefully treated because of sensitivity to notch, with special consideration given to screw-hub design.

Tags: Research Support, Non-U.S. Gov't

Descriptors: *Bone Plates--statistics and numerical data--SN; *Bone Screws--statistics and numerical data--SN; *Implants, Experimental --statistics and numerical data--SN; *Materials Testing--statistics and numerical data--SN; *Spinal Fusion--instrumentation--IS; Biomechanics; Bone Plates--standards--ST; Bone Screws--standards--ST; Elasticity; Equipment Design; Equipment Failure Analysis--statistics and numerical data--SN; Humans; Implants, Experimental--standards--ST; Materials Testing --instrumentation--IS; Materials Testing--methods--MT; Stress, Mechanical; Titanium--physiology--PH

CAS Registry No.: 12743-70-3 (titanium alloy (TiAl6V4)); 7440-32-6

(Titanium)
Record Date Created: 20030827
Record Date Completed: 20040225

43/5/4 (Item 4 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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08420477 PMID: 3194791

Posterior plating of the cervical spine. A biomechanical comparison of different posterior fusion techniques.

Gill K; Paschal S; Corin J; Ashman R; Bucholz R W
Division of Orthopaedic Surgery, University of Texas Southwestern Medical Center, Dallas.

Spine (UNITED STATES) Jul 1988, 13 (7) p813-6, ISSN 0362-2436
Journal Code: 7610646

Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS

Posterior arthrodesis is a preferred treatment for posttraumatic instability of the cervical spine. While most surgical constructs yield predictably high rates of fusion in satisfactory alignment, certain injury patterns involving fractures of the lamina or spinous processes may preclude rigid immobilization by simple wiring techniques. Plate fixation of the posterolateral masses has been advocated for such injuries. The purpose of this biomechanical study was to test the relative stiffness provided by different posterior fusion constructs, including lateral mass plating. All testing was performed on fresh, unembalmed cadaveric spines divided into two vertebral segment units. Muscular tissue was stripped from the specimens, but all discal and ligamentous structures were preserved. Four different posterior fixation constructs were tested. These included 1) Rogers interspinous wiring, 2) Halifax laminar clamps, 3) bilateral 1/3 tubular plates on the lateral masses, using unicortical screws, and 4) bilateral 1/3 tubular plates on the lateral masses, using bicortical screws. Stiffness measurements were taken in both flexion and extension on all specimens. Yield strength and fatigue strength of the spines were not measured. It was found that 1/3 tubular plates secured with bicortical screws to the lateral masses provided the highest mean stiffness. Less stiffness was found in spines stabilized by Halifax clamps, interspinous wiring, and plates secured with unicortical screws. There was, however, no statistically significant difference in stiffness provided by any of these four **implants**. It was concluded that there is no advantage in plate fixation over standard fusion constructs in augmenting the stiffness of posterior fixation of the cervical spine.

Tags: Comparative Study; Research Support, Non-U.S. Gov't
Descriptors: *Bone Plates; *Spinal Fusion--methods--MT; *Spine
--physiopathology--PP; Biomechanics; Humans; Movement; Neck; Orthopedic
Fixation Devices

Record Date Created: 19890112
Record Date Completed: 19890112

43/5/5 (Item 1 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
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0015694886 BIOSIS NO.: 200600040281

Rod for cervical vertebra and connecting system thereof

AUTHOR: Ueyama Kazumasa; Sannohe Akio; Echigoya Naoki; Oribe Kazuya; Ina Noriyuki

AUTHOR ADDRESS: Aomori ken, Japan**Japan

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents DEC 21 2004 2004

PATENT NUMBER: US 06832999 PATENT DATE GRANTED: December 21, 2004 20041221

PATENT CLASSIFICATION: 606-61 PATENT ASSIGNEE: Showa Ika Kohgyo Co., Ltd.

PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A connector is provided with a first fastening member **55** having an engagement hole **53** freely engaging with a head portion of an implant **41** screwed and inserted to a body of vertebra and a fastening groove **57**, a second fastening member **63** having an insertion hole **61** freely inserting a rod **49** therethrough and a fastening groove **65**, and a fastening device **69** freely penetrating a through hole **59** crossing to the fastening groove **57** in the first fastening member **55** and a through hole **67** crossing to the fastening groove **65** in the second fastening member **63**, and an angle adjusting and engaging portion is provided on connecting surfaces **55** and **63** between the first fastening member **55** and the second fastening member **63**.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment Apparatus Devices and Instrumentation;

Biomedical Engineering--Allied Medical Sciences

ORGANISMS: PARTS ETC: cervical vertebrae--skeletal system

METHODS & EQUIPMENT: cervical vertebral connecting rod--prosthetic

CONCEPT CODES:

10511 Biophysics - Bioengineering

18004 Bones, joints, fasciae, connective and adipose tissue - Physiology and biochemistry

43/5/13 (Item 9 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0014479150 BIOSIS NO.: 200300447869

Surgical implant

AUTHOR: Collins Simon Nicholas (Reprint); Fletcher David Mark

AUTHOR ADDRESS: Gloucestershire, UK**UK

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1274 (1): Sep. 2, 2003 2003

MEDIUM: e-file

PATENT NUMBER: US 6613053 PATENT DATE GRANTED: September 02, 2003 20030902

PATENT CLASSIFICATION: 606-69 PATENT ASSIGNEE: Corin Limited, Cirencester, UK PATENT COUNTRY: USA

ISSN: 0098-1133 (ISSN print)

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A surgical implant, typically a cervical plate assembly,

comprises a **plate** having at least two apertures and two screw threaded **fastening** devices for securing the plate to bone. Each aperture in the plate has an annular groove intermediate opposite ends of the aperture and each fastening device comprises an outer screw and an inner plug. The screw has a head at one end, a tip at the other end, an externally threaded shank between the head and the tip and an internal bore extending axially through the head and at least part way into the shank for receiving the inner plug. The head comprises a plurality of resiliently deformable fingers separated by one another by axially extending slits. Each finger has an outwardly projecting rib extending circumferentially of the head intermediate opposite ends of the finger for snap fit engagement in the annular groove of a respective plate aperture. The inner plug is arranged so that when it is inserted into the internal bore of the screw it will prevent contraction of the head of the screw thereby preventing the ribs disengaging from the groove.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment Apparatus Devices and Instruments; Orthopedics
--Human Medicine, Medical Sciences; Surgery--Medical Sciences

METHODS & EQUIPMENT: annular groove--medical equipment; assembly aperture
--medical equipment; bone screw--medical equipment; cervical plate
assembly--medical equipment; screw threaded fastening device--medical
equipment; surgical implant--medical equipment

CONCEPT CODES:

11105 Anatomy and Histology - Surgery

12512 Pathology - Therapy

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

43/5/15 (Item 11 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0014192433 BIOSIS NO.: 200300151152

Taper-locked adjustable connector

AUTHOR: Taylor Harold Sparr (Reprint); Morrison Matthew M

AUTHOR ADDRESS: Memphis, TN, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1267 (3): Feb. 18, 2003 2003

MEDIUM: e-file

PATENT NUMBER: US 6520962 PATENT DATE GRANTED: February 18, 2003 20030218

PATENT CLASSIFICATION: 606-61 PATENT ASSIGNEE: SDGI Holdings, Inc.

PATENT COUNTRY: USA

ISSN: 0098-1133 (ISSN print)

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A **connection** assembly between a **spinal implant** rod and a **vertebral** anchor. The assembly has a longitudinal **member**, a housing, a rod interface washer, and a compression member. The longitudinal member has an aperture at one end and a wedge at the other. The housing has a passageway to accept the shank of a bone screw and a bore to accept the wedge. The bore is open to the passageway so that when the wedge is pulled from the bore it pushes against the shank of the bone screw, trapping the bone screw between the wedge and the sidewalls of the passageway. Threading a setscrew into the aperture presses a spinal rod against the washer, presses the washer against the housing, and pulls the wedge against the shank of the bone screw. Further tightening of the setscrew then locks the bone screw and rod together.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment Apparatus Devices and Instruments; Orthopedics
--Human Medicine, Medical Sciences; Surgery--Medical Sciences
METHODS & EQUIPMENT: taper-locked adjustable connector--medical equipment
; vertebral anchor-spinal implant rod connector assembly--medical
equipment; longitudinal member--medical equipment; housing--medical
equipment; rod interface washer--medical equipment; compression member
--medical equipment; bone screw--medical equipment; setscrew--medical
equipment; spinal rod--medical equipment

CONCEPT CODES:

11105 Anatomy and Histology - Surgery
12512 Pathology - Therapy
18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

43/5/17 (Item 13 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013864070 BIOSIS NO.: 200200457581

Intervertebral endoprosthesis with a toothed connection plate

AUTHOR: Keller Arnold (Reprint)

AUTHOR ADDRESS: Kayhude, Germany**Germany

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1260 (2): July 9, 2002 2002

MEDIUM: e-file

PATENT NUMBER: US 6416551 PATENT DATE GRANTED: July 09, 2002 20020709

PATENT CLASSIFICATION: 623-1711 PATENT ASSIGNEE: Waldemar Link (GmbH and
Co.), Hamburg, Germany PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: An implant, in particular an **intervertebral endoprosthesis**,
with a **connection plate** (3) which is to be fixed so as to bear on a
bone surface and which is to be applied to the bone surface in a
direction of application running transverse to its main extension. For
protection against a shearing force running parallel to its main
extension, the connection plate (3) has teeth (6) projecting in the
direction of application. These teeth (6) are delimited by surfaces (11,
12, 13) which include a main surface (11) arranged in the direction of
application and transverse to the direction of shearing. Two teeth or
groups of teeth in each case lie opposite one another in the direction of
shearing and point in opposite directions.

DESCRIPTORS:

MAJOR CONCEPTS: Biomedical Engineering--Allied Medical Sciences;
Equipment, Apparatus, Devices and Instrumentation

METHODS & EQUIPMENT: intervertebral endoprosthesis--prosthetic; teeth--
prosthetic; toothed connection plate--prosthetic

CONCEPT CODES:

10511 Biophysics - Bioengineering

43/5/18 (Item 14 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013781683 BIOSIS NO.: 200200375194

Spinal fixation system

AUTHOR: Songer Matthew N; Vlahos Jeffrey D (Reprint); Kilpela Thomas S;
Jayaraman Gopal
AUTHOR ADDRESS: Bruce Crossing, MI, USA**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1258 (4): May 28, 2002 2002
MEDIUM: e-file
PATENT NUMBER: US 6395030 PATENT DATE GRANTED: May 28, 2002 20020528
PATENT CLASSIFICATION: 623-1711 PATENT ASSIGNEE: Michigan Technological
University, Houghton, MI, USA; Pioneer Laboratories, Inc. PATENT COUNTRY:
USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: An implantable, spinal, vertebral replacement device comprises a tubular cage for fitting into a space left by a missing vertebral body and for optionally retaining bone graft material. First and second transverse plates are respectively positioned at opposed ends of the tubular cage for supporting the respective cage ends and for pressing a plate face against an adjacent vertebral body in spinal column-supporting relation. The transverse plates are each **joined** in transverse relation to at least one **vertebral attachment plate** which, in use, extends generally parallel to the **spine**. The **vertebral attachment plate** defines screw holes for screw securance to at least one **vertebral body** adjacent to the space. Preferably, one or more **vertebral attachment plates** are **connected** to the pair of adjacent **vertebral bodies** that bracket the space left by the missing vertebral body.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment, Apparatus, Devices and Instrumentation;
Orthopedics--Human Medicine, Medical Sciences

METHODS & EQUIPMENT: spinal fixation system--medical equipment

CONCEPT CODES:

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

?

47/5/3 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0015650638 BIOSIS NO.: 200510345138
Intersomatic implants in two parts
AUTHOR: Crozet Yves
AUTHOR ADDRESS: Ramsey, NJ USA**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents FEB 15 2005 2005
PATENT NUMBER: US 06855168 PATENT DATE GRANTED: February 15, 2005 20050215
PATENT CLASSIFICATION: 623-1711 PATENT ASSIGNEE: Stryker France
PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A **spinal implant** includes a hollow body having a distal end, a proximal end, and a pair of lateral walls extending from the distal end to the proximal end, the lateral walls having a concave-shaped cross-section with curved exterior surfaces and having concave, non-threaded interior surfaces for defining an at least partially cylindrical internal space between the lateral walls. The **spinal implant** also includes an **anchoring member** having bone **anchoring** projections including a screw thread on an exterior surface thereof, wherein at least one of the lateral walls adjacent the proximal end of the hollow body includes a reentrant thread adapted to cooperate with the screw thread of the **anchoring member** when the **anchoring** element is rotated for enabling the **anchoring member** to be screwed into the internal space of the hollow body.

DESCRIPTORS:

MAJOR CONCEPTS: Surgery--Medical Sciences; Equipment Apparatus Devices and Instrumentation; Biomedical Engineering--Allied Medical Sciences
METHODS & EQUIPMENT: intersomatic **implants** in two parts-- **prosthetic**
CONCEPT CODES:
10511 Biophysics - Bioengineering
11105 Anatomy and Histology - Surgery
12512 Pathology - Therapy

47/5/4 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0015117063 BIOSIS NO.: 200500024128
Two-part intersomatic implant
AUTHOR: Crozet Yves (Reprint)
AUTHOR ADDRESS: Seynod, France**France
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1288 (5): Nov. 30, 2004 2004
MEDIUM: e-file
PATENT NUMBER: US 6824564 PATENT DATE GRANTED: November 30, 2004 20041130
PATENT CLASSIFICATION: 623-1711 PATENT ASSIGNEE: Stryker France, SAS,
France PATENT COUNTRY: USA
ISSN: 0098-1133 (ISSN print)
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A **spinal implant** includes a hollow body having a distal end, a proximal end, and a pair of lateral walls extending from the distal end to the proximal end, the lateral walls having concave, non-threaded interior surfaces for defining an at least partially cylindrical internal space between the lateral walls. The **spinal implant** also includes an **anchoring member** having bone **anchoring** projections including a screw thread on an exterior surface thereof, wherein at least one of the lateral walls adjacent the proximal end of the hollow body includes a reentrant thread adapted to cooperate with the screw thread of the **anchoring member** when the **anchoring** element is rotated for enabling the **anchoring member** to be screwed into the internal space of the hollow body. The **anchoring member** has a proximal end, a distal end, a major axis extending between the proximal and distal ends, an interior space, and a fork surrounding the interior space, the fork including branches extending along a major axis of the **anchoring member**, the branches having a frustoconical exterior surface with a diameter that decreases from the proximal end toward the distal end of the **anchoring member**, and wherein the screw thread comprises a helical band connected to the fork and encircling the fork and the interior space of the **anchoring member**.

DESCRIPTORS:

MAJOR CONCEPTS: Biomedical Engineering--Allied Medical Sciences;

Orthopedics--Human Medicine, Medical Sciences

ORGANISMS: PARTS ETC: **spine** --skeletal system

METHODS & EQUIPMENT: **spinal implant** -- **prosthetic**

CONCEPT CODES:

10511 Biophysics - Bioengineering

18004 Bones, joints, fasciae, connective and adipose tissue - Physiology and biochemistry

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

47/5/7 (Item 5 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013990938 BIOSIS NO.: 200200584449

Interbody cavity implant, in particular for cervical vertebrae

AUTHOR: Baccelli Christian (Reprint); Conchy Frederic

AUTHOR ADDRESS: Ayguemorte les Graves, France**France

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1262 (4): Sep. 24, 2002 2002

MEDIUM: e-file

PATENT NUMBER: US 6454805 PATENT DATE GRANTED: September 24, 2002 20020924

PATENT CLASSIFICATION: 623-1711 PATENT ASSIGNEE: DIMSO (Distribution

Medicale du Sud-Ouest), France PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: The invention concerns an **implant** comprising a body with an upper surface and a lower surface capable of pressing on the **vertebral** end-plate located immediately above and beneath and having further at least a through aperture emerging on the upper and lower surfaces. The invention is characterized in that the **implant** further comprises an **anchoring member** mounted in such a way as to be capable of moving in the aperture. The said **anchoring member** includes a support part

adjacent to a first **vertebral end-plate** , and at least a projecting **anchoring** element extending from the support part towards the opposite **vertebral end-plate**. Thus, when the **implant** is compressed between the **vertebral end-plates** , the **anchoring member** is stressed by the first **vertebral end-plate** at the support part to move relative to the body and the at least providing projecting element overlaps the body surface facing the opposite **vertebral end-plate** and is **anchored** therein. The invention is particularly applicable to bone fusion between **cervical vertebrae** .

DESCRIPTORS:

MAJOR CONCEPTS: Equipment, Apparatus, Devices and Instrumentation;
Orthopedics--Human Medicine, Medical Sciences; Surgery--Medical
Sciences

ORGANISMS: PARTS ETC: **cervical vertebrae** --skeletal system

METHODS & EQUIPMENT: interbody cavity **implant** -- **prosthetic**

CONCEPT CODES:

12512 Pathology - Therapy

18004 Bones, joints, fasciae, connective and adipose tissue - Physiology
and biochemistry

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

47/5/8 (Item 6 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013883808 BIOSIS NO.: 200200477319

Devices and methods of vertebral disc augmentation

AUTHOR: Lambrecht Gregory H (Reprint)

AUTHOR ADDRESS: Natick, MA, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1260 (5): July 30, 2002 2002

MEDIUM: e-file

PATENT NUMBER: US 6425919 PATENT DATE GRANTED: July 30, 2002 20020730

PATENT CLASSIFICATION: 623-1716 PATENT ASSIGNEE: Intrinsic Orthopedics,
Inc., Wilmington, MA, USA PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A disk herniation constraining device for **implantation** into a **vertebral** disk can include a support member for support of a herniated portion of a disk. The support **member** can be connected to an **anchor** . The constraining device can include the insertion of augmentation material within the disk. A defect in the annulus of a disk can be closed using a **prosthesis** such as a barrier. The barrier can be placed between the annulus and the nucleus of the disk. The barrier can include a sealant and an enlarger. The barrier can be **implanted** into the disk using a delivery cannule, an advancer and at least one control filament to control the positioning of the barrier over the defect. A stiffening element can be included within the barrier to impart stiffness to the barrier.

DESCRIPTORS:

MAJOR CONCEPTS: Equipment, Apparatus, Devices and Instrumentation;
Methods and Techniques; Orthopedics--Human Medicine, Medical Sciences

METHODS & EQUIPMENT: **vertebral disc augmentation**--therapeutic method;
vertebral disc augmentation device--medical equipment

CONCEPT CODES:

12512 Pathology - Therapy

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

47/5/9 (Item 7 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013511978 BIOSIS NO.: 200200105489

Anchoring member

AUTHOR: Biedermann L; Harms J; Shufflebarger H L

AUTHOR ADDRESS: Villingen, Germany**Germany

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1208 (2): p1232 March 10, 1998 1998

MEDIUM: print

PATENT NUMBER: US 5725527 PATENT DATE GRANTED: March 10, 1998 19980310

PATENT CLASSIFICATION: 606-61 PATENT ASSIGNEE: BIEDERMANN MOTECH GMBH

PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Citation

LANGUAGE: English

DESCRIPTORS:

MAJOR CONCEPTS: Bioprocess Engineering; Skeletal System--Movement and Support

MISCELLANEOUS TERMS: ATTACHMENT DEVICE; BIOTECHNOLOGY; **IMPLANT** ;

VERTEBRA

CONCEPT CODES:

18001 Bones, joints, fasciae, connective and adipose tissue - General and methods

10511 Biophysics - Bioengineering

47/5/11 (Item 9 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013322307 BIOSIS NO.: 200100494146

Multi-axial bone anchor system

AUTHOR: Morrison Matthew M (Reprint); Barker B Thomas; Young John Stewart; Beale Jeffrey W; Johnson Chris E

AUTHOR ADDRESS: Cordova, TN, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1249 (4): Aug. 28, 2001 2001

MEDIUM: e-file

PATENT NUMBER: US 6280445 PATENT DATE GRANTED: August 28, 2001 20010828

PATENT CLASSIFICATION: 606-61 PATENT ASSIGNEE: SDGI Holdings, Inc.

PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A **spinal implant** system is disclosed for the fixation of bone segments in the **spine** . The system includes an elongated **member** , one or more bone **anchor** assemblies, and stabilizer **members** which are fitted within the elongated **member** . A bone **anchor** is attached to a bone, and the elongated member and stabilizer are fitted over the bone anchor. A rounded washer and nut having a corresponding rounded underside

surface are fitted on to the bone **anchor** over the elongated **member** , and tightened. The configuration of the bone anchor assembly, including an intermediate portion of the bone anchor, the arcuate washer, and the nut, along with the configuration of the sliding support, allows multi-axial positioning of the bone **anchor** with respect to the elongated **member** at a plurality of locations along a slotted member.

DESCRIPTORS:

MAJOR CONCEPTS: Biomedical Engineering--Allied Medical Sciences;
Equipment, Apparatus, Devices and Instrumentation; Orthopedics--Human
Medicine, Medical Sciences

ORGANISMS: PARTS ETC: bone--skeletal system

METHODS & EQUIPMENT: multi-axial bone anchor system-- **prosthetic**

CONCEPT CODES:

00532 General biology - Miscellaneous

?

Set	Items	Description
S1	178765	SPINE? OR SPINAL? OR VERTEBRA? ? OR VERTEBRAL OR INTERVERT- EBRA? OR CERVICAL? OR LUMBAR?
S2	869542	PROSTHE? OR IMPLANT? OR ENDOPROSTHE? OR REPLACEMENT? OR AR- THROPLAST?
S3	7656	ENDPLATE? OR BASEPLATE? OR COVERPLATE? OR (COVER?? OR COVE- RING? OR END OR BASE) () PLATE? ?
S4	2798747	CORE OR CORES OR DISC OR DISCS OR DISK OR DISKS OR DISCUS - OR MENISCUS
S5	1820153	SECURE? ? OR SECURING
S6	6632561	LIMIT??? OR STOP OR STOPS OR STOPP??? OR RESTRICT?
S7	12854241	OUTER OR OVER OR VENTRAL? OR DORSAL?
S8	7255357	PLATE OR PLATES OR MEMBER? ? OR SHELL? ? OR SHEET? ? OR PA- NEL? ?
S9	2520684	UNCONNECT? OR DISCONNECT? OR SEPARAT?
S10	11107253	COUPL??? OR ATTACH? OR CONNECT? OR SECUR??? OR JOIN OR JOI- NED OR JOINING OR FASTEN??? OR ENGAG???
S11	12392	S5(3N)S8
S12	0	S1(S)S2(S)S3(S)S4(S)S11
S13	0	S1(S)S2(S)S3:S4(S)S11
S14	0	S1(S)S2(S)S11
S15	263427	S5:S7(5N)S8
S16	0	S1(S)S2(S)S3(S)S4(S)S15
S17	6	S1(S)S2(S)S3:S4(S)S15
S18	2	RD (unique items)
S19	19	S1(S)S2(S)S15
S20	13	S19 NOT S17
S21	8	RD (unique items)
S22	70	S1(S)S2(S)S3(S)S4
S23	11	S1(S)S2(S)S3(S)S4(S)S8
S24	10	S23 NOT (S17 OR S20)
S25	6	RD (unique items)
S26	0	S2(S)S3(S)S4(S)S11
S27	0	S2(S)S3(S)S4(S)S15
S28	15	S2(S)S3(S)S4(S)S8
S29	4	S28 NOT (S17 OR S20 OR S24)
S30	2	RD (unique items)
S31	2962	S1(5N)S10
S32	6	S31 (S) S2 (S) S3(S)S4
S33	6	S32 NOT (S17 OR S20 OR S24 OR S29)
S34	4	RD (unique items)
S35	42	S31 (S) S2 (S) S3:S4
S36	36	S35 NOT (S17 OR S20 OR S24 OR S29 OR S33)
S37	22	RD (unique items)

? show files

File 9:Business & Industry(R) Jul/1994-2006/Feb 27
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File 16:Gale Group PROMT(R) 1990-2006/Feb 28
(c) 2006 The Gale Group

File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group

File 148:Gale Group Trade & Industry DB 1976-2006/Feb 27
(c)2006 The Gale Group

File 621:Gale Group New Prod.Annou.(R) 1985-2006/Feb 27
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File 47:Gale Group Magazine DB(TM) 1959-2006/Feb 27
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File 15:ABI/Inform(R) 1971-2006/Feb 27
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File 441:ESPICOM Pharm&Med DEVICE NEWS 2006/Oct W4
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File 149:TGG Health&Wellness DB(SM) 1976-2006/Feb W2
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File 141:Readers Guide 1983-2004/Dec
(c) 2005 The HW Wilson Co
File 484:Periodical Abs Plustext 1986-2006/Feb W3
(c) 2006 ProQuest
File 636:Gale Group Newsletter DB(TM) 1987-2006/Feb 27
(c) 2006 The Gale Group

25/3,K/1 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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11979616 Supplier Number: 129711568 (USE FORMAT 7 FOR FULLTEXT)
Total disk replacement offers relief, challenges.(Musculoskeletal Disorders)(DePuy Spine Inc.'s Charite artificial spinal disk)
Wendling, Patrice
Family Practice News, v35, n4, p67(1)
Feb 15, 2005
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Professional
Word Count: 1564

... function, Charite clinical trial investigator Scott Blumenthal, M.D., said in an interview.

The Charite **disk**, which was approved by the Food and Drug Administration in October, is indicated for patients with single-level degenerative **disk** disease. The device consists of two cobalt chromium end **plates** and a polyethylene **core**. There's no secondary bone graft harvesting or fixation of the **spine** with screws and rods to stabilize, as in **spinal** fusion surgery. When **implanted**, the device restores the natural distance between two **vertebrae** and allows movement at the level of **implantation**. And unlike the strict limitation imposed on patients who have undergone fusion surgery, when the **disk** is **implanted** successfully, there are no movement restrictions, said Dr. Blumenthal of the Texas Back Institute, Plano...

25/3,K/2 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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10359762 Supplier Number: 99616836 (USE FORMAT 7 FOR FULLTEXT)
Spine Solutions Completes \$350 Million Merger With Synthes-Stratec.
Business Wire, p5393
April 4, 2003
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 398

... distributors in Europe, Asia, the Middle East and Latin America.

The patented ProDisc system for **lumbar disc replacement** is designed with materials long used in orthopedic **implant** devices, including knee and hip **replacements**. The **disc** consists of three elements: a **core** of ultra-high molecular-weight-polyethylene that attaches to the bottom piece of two cobalt-chromium alloy **end - plates**.

The technology was first developed in the late 1980s by Dr. Thierry Marnay, in Montpellier...

25/9/2 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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10359762 Supplier Number: 99616836 (THIS IS THE FULLTEXT)
Spine Solutions Completes \$350 Million Merger With Synthes-Stratec.
Business Wire, p5393

April 4, 2003
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 398
TEXT:

Business Editors/Health/Medical Writers

NEW YORK--(BUSINESS WIRE)--April 4, 2003

Spine Solutions, Inc. completed a previously announced \$350 million merger agreement with Synthes-Stratec, Inc, Oberdorf, Switzerland.

Synthes-Stratec is making an immediate cash payment of \$175 million with a further \$175 million payable upon Spine Solutions achieving certain milestones relating to FDA approval of its lumbar and cervical artificial disc products.

Spine Solutions' ProDisc total spine replacement system has been in FDA Investigational Device Exemption (IDE) clinical studies since October, 2001. To date more than 2,300 lumbar discs have been implanted in patients in 26 countries outside the US where ProDisc is already available commercially.

Marc R. Viscogliosi, a senior partner at Viscogliosi Bros. LLC, a controlling shareholder in Spine Solutions, said: "Although we had discussions with all of the leading players in the spine industry, we felt that Synthes-Stratec's offer would deliver the greatest value to shareholders. ProDisc uniquely complements Synthes' existing range of spine products. Also, Synthes' US marketing and distribution reach will have a synergistic effect on the proposed commercialization of ProDisc in North America by accelerating acceptance for spine arthroplasty as an alternative to fusion."

As previously noted, Spine Solutions will operate as an independent subsidiary of Synthes-Stratec. ProDisc will also continue to be sold through distributors in Europe, Asia, the Middle East and Latin America.

The patented ProDisc system for **lumbar disc replacement** is designed with materials long used in orthopedic **implant** devices, including knee and hip **replacements**. The **disc** consists of three elements: a **core** of ultra-high molecular-weight-polyethylene that attaches to the bottom piece of two cobalt-chromium alloy **end - plates**.

The technology was first developed in the late 1980s by Dr. Thierry Marnay, in Montpellier, France and refined in cooperation with Aesculap AG & Co. in Germany. A study completed in 2000 of 64 patients implanted with ProDisc during the period 1990-1993 found 93 percent satisfaction in key areas such as mobility and comfort.

In 1999, Viscogliosi Bros. LLC, a private banking and venture capital firm specializing in the orthopedic industry, established Spine Solutions, Inc., with Aesculap, a unit of B.Braun Melsungen AG, as a development stage company to acquire and commercialize the ProDisc system worldwide.

For information go to: www.spinesolutionsinc.com and www.synthes-stratec.com

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PUBLISHER NAME: Business Wire

COMPANY NAMES: *Spine Solutions; Synthes-Stratec Inc.

GEOGRAPHIC NAMES: *4EXSI (Switzerland)

INDUSTRY NAMES: BUS (Business, General); BUSN (Any type of business)

25/9/6 (Item 1 from file: 636)

DIALOG(R) File 636:Gale Group Newsletter DB(TM)
(c) 2006 The Gale Group. All rts. reserv.

04896786 Supplier Number: 69805132 (THIS IS THE FULLTEXT)

Raymedica's spinal implant set for launch in Brazil.

Biomedical Materials, p3

Feb, 2001

ISSN: 0955-7717

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 323

TEXT:

Raymedica Inc is launching its spinal implant, the prosthetic disc nucleus device (PDN), in Brazil.

The launch is being made through GMReis, a Brazilian spinal implant manufacturer. The device treats low back pain and is an alternative treatment to spinal fusion. It does not have marketing approval from the US Food and Drug Administration, so can only be used on an investigational basis in the USA.

However, in 2000 Raymedica began the commercial launch of the PDN device outside the USA. The company has won regulatory approval and trained surgeons in over 20 countries so far.

The device is designed to restore **disc** height between the **vertebrae**. It must be very tough to withstand the forces placed on the **spine** in a lifetime. It must also be both biocompatible and small enough to minimize operative trauma, said Raymedica. The device has a hydrogel **core** moulded in a pellet-shape. It has to be strong enough to support the **lumbar vertebrae**, but must also be yielding enough to act as an elastomeric cushion that does not damage the **vertebral end plates**. The **core** itself is compressed during manufacture to make the **implant** smaller.

Once implanted, the hydrogel begins to absorb fluid and expand. The hydrogel, a material often used in medical devices, must supply enough lifting force for long-term support.

The core is encased in a tightly woven jacket of high molecular weight polyethylene. The porous jacket allows fluid to pass through to the hydrogel core. The jacket is flexible, but inelastic. It allows the hydrogel core to deform and reform in response to changes in compressive forces, while constraining horizontal and vertical expansion upon hydration.

For further information, contact: Anthony Phillips, President, Raymedica Inc, 9401 James Avenue South, Suite 120, Bloomington, MN 55431, USA; tel: +1-952-885-0500; fax: +1-952-885-0200; Internet address: www.raymedica.com

THIS IS THE FULL TEXT: COPYRIGHT 2001 International Newsletters

Subscription: \$474.00 per year. Published monthly. PO Box 133, Whitney, Oxfordshire, England OX8 6ZH., United Kingdom

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PUBLISHER NAME: International Newsletters

COMPANY NAMES: *RayMedica Inc.

GEOGRAPHIC NAMES: *1USA (United States)

INDUSTRY NAMES: CHEM (Chemicals, Plastics and Rubber); HLTH (Healthcare
- Medical and Health)

?

34/9/2 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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10339251 Supplier Number: 99165120 (THIS IS THE FULLTEXT)
Artificial disc nears U.S. FDA approval. (Industry News). (SB Charite III
Intervertebral Dynamic Disc Spacer from Link Spine Group) (Brief Article)
Molinaro, Hope
Plastics Engineering, v59, n3, p62(1)
March, 2003
ISSN: ISSN: 0091-9578
Language: English Record Type: Fulltext
Article Type: Brief Article
Document Type: Magazine/Journal; Refereed; Academic Trade
Word Count: 266

TEXT:

The SB Charite III Intervertebral Dynamic Disc Spacer is expected to be the first artificial lumbar disc to be approved by the U.S. FDA (Food & Drug Administration) for general release, reports the Chicago Institute of Neurosurgery and Neuroresearch (CINN), which is now conducting clinical trials with the prosthesis. FDA approval is expected in 2004.

Made by the Link Spine Group in Hamburg, Germany, the SB Charite is a **prosthesis** system consisting of two **endplates** made of high-quality cobalt chromium alloy with an ultra-high molecular weight polyethylene sliding **core** placed between them. The **endplates** are **attached** to the **vertebral** bodies by means of anchoring teeth along their edges. Placed between these articulating **endplates**, Link Spine Group explains, the polyethylene sliding **core** is designed to allow near-normal physiological movement.

This is why most people with degenerative disc disease are likely to opt for the artificial disc over spinal fusion--the procedure it is intended to replace. "Rather than immobilizing the joint, as is the case with fusion," says CINN, the SB Charite replaces the defective disc with one that is "designed to mimic the normal function, of a healthy disc."

Moreover, says CINN, the hospital stay for this new procedure is only one to three days. Patients need not wear a brace, require less physical therapy, and can return to daily activities soon after surgery. The artificial disc is expected to help more than 400,000 Americans who suffer from degenerative, disc disease, says CINN. For more information, visit www.cinn.org and www.linkspinegroup.com.

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PUBLISHER NAME: Society of Plastics Engineers, Inc.

COMPANY NAMES: *Link Spine Group_Product development

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EVENT NAMES: *331 (Product development)

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PRODUCT NAMES: *3000000 (Rubber & Plastic Products); 3079600 (Medical Plastics)

INDUSTRY NAMES: BUSN (Any type of business); CHEM (Chemicals, Plastics and Rubber)

SIC CODES: 3000 (RUBBER AND MISC. PLASTICS PRODUCTS); 3840 (Medical Instruments and Supplies)

NAICS CODES: 326 (Plastics and Rubber Products Manufacturing); 33911 (Medical Equipment and Supplies Manufacturing)

34/9/3 (Item 1 from file: 441)
DIALOG(R)File 441:ESPICOM Pharm&Med DEVICE NEWS
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00077957 00082137 (THIS IS THE FULLTEXT)

DePuy's Charite artificial disc cleared in the US to treat low back pain

Orthopaedics Business

27 October 2004 (20041027)

RECORD TYPE: FULLTEXT WORD COUNT: 466

TEXT:

The FDA has approved the Charite artificial disc, a device that treats severe low back pain by replacing a damaged or worn out spinal disc with an artificial one. While artificial replacements are commonly used in hips and knees, this is the first FDA approval of such a device for spinal discs. The approval was announced by DePuy Spine, a Johnson & Johnson company, the manufacturer of the disc. DePuy acquired exclusive worldwide rights to the SB Charite Artificial Disc in June 2003, when the company completed the acquisition of the Link Spine Group.

The Charite artificial disc is a high-tech device made of two metallic endplates and a moveable high-density plastic centre that, once implanted, is designed to help align the spine and preserve its ability to move. Spinal discs maintain the position of the spine and allow for the flexibility to bend and twist. During the procedure, a general or vascular surgeon approaches the spine through an incision in the abdomen and carefully moves internal organs and blood vessels out of the way to provide access to the spine. A spine surgeon then uses special tools to remove the damaged disc and creates a space between two vertebrae for the implantation of the artificial disc. The procedure generally takes one to two hours. In spinal fusion surgery a damaged spinal disc is removed and vertebrae are joined together using bone grafts and metal screws and/or cages so that motion can no longer occur in this area of the spine. Patients usually have to wear a brace for about three months after surgery. In clinical trials comparing artificial disc replacement with spinal fusion surgery, Charite patients maintained flexibility, experienced improvements in pain and function, left the hospital sooner and were more satisfied with the procedure. Complication rates for both groups of patients were similar. Charite patients were also able to return to work and normal activity, sooner than his spinal fusion patients. On average, Charite patients returned to work in 12 weeks or less, compared with the spinal fusion patients who were not able to go back to work for about six months. Currently, there are 15 spine centres throughout the US who offer disc replacement with the Charite artificial disc and many more centres are expected within the next several months as surgeons receive extensive training in the procedure. Patients may have to wait several weeks or months while surgeons complete this mandatory training. DePuy Spine is sponsoring a training and education programme for surgeons, which is a combination of hands-on surgery, consultation and visitation with top spine surgeons, lectures and web-based educational materials. Much of the training will take place at The Center for Spine Arthroplasty at the Endo-Surgery Institute. More than 50 regional training centres throughout the US will also provide training.

COMPANY: DePuy; Johnson & Johnson

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37/9/3 (Item 1 from file: 16)
DIALOG(R) File 16:Gale Group PROMT(R)
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12281567 Supplier Number: 133855946 (THIS IS THE FULLTEXT)
Globus Begins Cervical Artificial Disc IDE Clinical Trial.

PR Newswire, pNA

July 8, 2005

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 486

TEXT:

PHOENIXVILLE, Pa., July 8 /PRNewswire/ -- Globus Medical, Inc., one of the ten largest spinal implant manufacturers in the U.S., announced today that it has initiated a clinical trial for its **Secure -C(TM) Cervical Artificial Disc** under the Investigational Device Exemption ("IDE") recently granted to Globus by the FDA. This announcement comes the day after Dr. Mike Marzluff successfully **implanted** the devices in two patients in Charleston, S.C.

Over 15 centers across the United States have agreed to participate in this important trial. In addition to Dr. Marzluff, several leading spine surgeons are serving as clinical investigators in the trial.

One of them, Dr. Scott Rushton, Clinical Assistant Professor at the University of Pennsylvania and Medical Director of the Lankenau Hospital Center for Spinal Disorders said, "We are very excited about initiating the clinical investigation of the Globus cervical artificial disc. The design of the Secure-C(TM) disc has significant biomechanical advantages and simplifies the insertion technique, compared to other devices. One of the long-term disadvantages of treating cervical disc disease with traditional fusion surgery is the increased risk of degenerative disease at the adjacent levels."

David Paul, CEO and founder of Globus commented on the clinical trial saying, "The launch of the Secure-C(TM) Cervical Artificial Disc clinical trial is an important milestone for Globus. It is the first of several non- fusion products that Globus will be placing into clinical trials over the next year. It is also a tangible demonstration of our strategy to harness the powerful synergy of surgeons' clinical expertise with our engineering ingenuity and capability to create products that will improve the lives of patients and grow our business."

Globus was founded by Mr. Paul and a team of engineers in 2003, with a vision to create products that enable spine surgeons to use both fusion and non-fusion solutions to meet the needs of their patients. Today Globus is one of the fastest growing companies in the spinal device industry and is a recognized leader in the development of motion sparing technology. Since its inception, Globus has vaulted into the top 10 spine technology companies in the U.S., with over \$40 million in annualized revenues. Globus' success is a result of its extensive surgeon collaboration in product development, its innovative cutting edge technology and its unprecedented record for speed in product development from the design phase through FDA approval to market introduction. Today, Globus has a full portfolio of products to meet all of a spine surgeon's needs and is one of the world's leaders in the development of motion sparing technology.

For information please contact Jenn Petka at Globus by phone at (610) 415-9000 or by email at jpetka@globusmedical.com

CONTACT: Jenn Petka of Globus Medical, Inc., +1-610-415-9000, or jpetka@globusmedical.com

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PUBLISHER NAME: PR Newswire Association LLC

INDUSTRY NAMES: BUSN (Business); BUS (Business, general)

37/9/4 (Item 2 from file: 16)
DIALOG(R) File 16:Gale Group PROMT(R)
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12275544 Supplier Number: 133802701 (THIS IS THE FULLTEXT)
NuVasive Files IDE for Cerpess(TM) Cervical Total Disc Replacement Product.
PR Newswire, pNA
July 6, 2005
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 914
TEXT:

SAN DIEGO, July 6 /PRNewswire-FirstCall/ -- NuVasive, Inc. , a medical device company focused on developing products for minimally disruptive surgical treatments for the spine, announced today that it filed for an Investigational Device Exemption (IDE) from the United States Food and Drug Administration (FDA) to investigate the safety and efficacy of its Cerpess (TM) cervical Total Disc Replacement (TDR) product on June 30, 2005 as planned. Approval of the IDE from the FDA would allow the Company to initiate a pivotal human clinical study of the device in the U.S.

TDR replaces a damaged or degenerative diseased spinal disc and allows for flexibility in that space by retaining the normal biomechanics of the spine and preserving natural range of motion versus the traditional fusion procedures which replace the disc with implants that bridge the space and facilitate new bone growth to eliminate motion.

NuVasive's Cerpess (TM) cervical TDR product incorporates a ceramic-on-ceramic design that the Company believes increases durability and eliminates the potential problems of wear debris from other bearing surfaces such as polyethylene. In pre-clinical testing, the Cerpess (TM) compared favorably to other artificial spinal discs currently in FDA clinical studies. Cerpess (TM) is also designed to ensure proper placement because of its "self-centering" feature. Cerpess (TM) is designed for implantation through an anterior approach to the cervical region of the spine (front of the neck).

Alexis V. Lukianov, Chairman and Chief Executive Officer, said, "The IDE filing for U.S. clinical trials of our Cerpess (TM) cervical TDR product represents a major milestone in NuVasive's artificial disc development efforts for motion preservation of the neck vertebrae. We believe the ceramic-on-ceramic design will achieve superior long-term wear characteristics compared to that of other bearing surfaces. Our initial TDR focus continues to be on the cervical region of the spine. We believe it offers a more substantial market opportunity and will experience a broader, more rapid adoption by spine surgeons particularly when coupled with our "self-centering" feature to simplify implantation . We plan to discuss the details of the FDA study for our Cerpess (TM) following IDE approval."

About NuVasive

NuVasive is a medical device company focused on the design, development and marketing of products for the surgical treatment of spine disorders. The Company's product portfolio is focused on applications in the over \$2 billion U.S. spine fusion market. The Company's current principal product offering includes a minimally disruptive surgical platform called Maximum Access Surgery, or MAS(TM), as well as classic fusion implants.

The MAS platform offers advantages for both patients and surgeons such as reduced surgery and hospitalization time and faster recovery. MAS combines three categories of current product offerings-NeuroVision(R), a proprietary software-driven nerve avoidance system; MaXcess(R), a unique split-blade design retraction system; and specialized implants, like SpheRx(TM) and CoRoent(TM)-that collectively minimize soft tissue

disruption during spine surgery while allowing maximum visualization and surgical reproducibility. NuVasive's classic fusion portfolio is comprised predominantly of proprietary saline packaged bone allografts and internal fixation products. NuVasive also has a robust R&D pipeline emphasizing both MAS and motion preservation products such as Total Disc Replacement (TDR).

NuVasive cautions you that statements included in this press release that are not a description of historical facts are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements involve risks, uncertainties, assumptions and other factors which, if they do not materialize or prove correct, could cause NuVasive's results to differ materially from historical results or those expressed or implied by such forward-looking statements. All statements, other than statements of historical fact, are statements that could be deemed forward-looking statements. The potential risks and uncertainties that could cause actual growth and results to differ materially include, but are not limited to, the process of seeking regulatory approval or clearance for NuVasive's products, including risks that such process could be significantly delayed; the possibility that the FDA may require significant changes to NuVasive's products or clinical studies; the risk that products may not perform as intended and may therefore not achieve commercial success; the risk that competitors may develop superior products or may have a greater market position enabling more successful commercialization; risks associated with changing market dynamics and opportunities in the fast-growing spine industry; and other risks and uncertainties more fully described in NuVasive's periodic filings with the Securities and Exchange Commission. NuVasive's public filings with the Securities and Exchange Commission are available at <http://www.sec.gov/>. NuVasive assumes no obligation to update any forward-looking statement to reflect events or circumstances arising after the date on which it was made.

CONTACT: Kevin C. O'Boyle, EVP & Chief Financial Officer, NuVasive, Inc., +1-858-909-1800, investorrelations@nuvasive.com; or Investors, Stephanie Carrington, +1-646-536-7017, scarrington@theruthgroup.com, or Nick Laudico, +1-646-536-7030, nlaudico@theruthgroup.com, both of The Ruth Group for NuVasive, Inc.

CONTACT: Kevin C. O'Boyle, EVP & Chief Financial Officer, NuVasive, Inc., +1-858-909-1800, investorrelations@nuvasive.com; or Investors, Stephanie Carrington, +1-646-536-7017, scarrington@theruthgroup.com, or Nick Laudico, +1-646-536-7030, nlaudico@theruthgroup.com, both of The Ruth Group for NuVasive, Inc.

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INDUSTRY NAMES: BUSN (Business); BUS (Business, general)

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DIALOG(R)File 16:Gale Group PROMT(R)

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12009633 Supplier Number: 131932927 (THIS IS THE FULLTEXT)

SpinalMotion Receives FDA Approval to Launch Clinical Studies Evaluating Lumbar and Cervical Artificial Disc Implants ; Secures \$20 million in Series B Funding.

Business Wire, pNA

April 27, 2005

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 662

TEXT:

MOUNTAIN VIEW, Calif. -- SpinalMotion, a developer of advanced total artificial disc technology for treating patients with degenerative disc disease, today announced that it has received conditional approvals from the U.S. Food & Drug Administration (FDA) of two Investigational Device Exemption (IDE) applications. Under the IDEs, SpinalMotion will commence two separate clinical trials, one for its lumbar implant and one for its cervical disc implant. In addition, the company announced that it has secured \$20 million of Series B financing.

IDE Studies

The lumbar trial will involve 25 U.S. sites in the first randomized study comparing two artificial discs. The investigational SpinalMotion Kineflex(TM) lumbar disc will be compared to another FDA-approved lumbar artificial disc. The cervical trial will involve 20 U.S. sites and feature a randomized study comparing the investigational SpinalMotion Kineflex-C(TM) to fusion. Both trials are designed to demonstrate equivalent clinical success rates to their respective controls. A two-year follow-up period is required for both trials. Enrollment is expected to begin this quarter.

Series B Funding

Three Arch Partners led the Series B funding of \$20 million as a new investor. Thomas Weisel Healthcare Venture Partners, a SpinalMotion founder and the lead investor in the company's Series A funding, also participated.

"The \$20 million will enable us to substantially complete enrollment in the cervical and lumbar studies," said David Hovda, President and CEO of SpinalMotion. "The significant commitment from our venture partners validates our team, our initial clinical performance data, and our technology's significant market potential."

"There aren't many companies with both cervical and lumbar IDEs," explained Bill Harrington, M.D., a partner at Three Arch Partners. "These approvals really separate SpinalMotion from the concept and early stage efforts to more of a leading stage company." He added, "SpinalMotion's concept embodies all of the essential elements of disc design learned from experience with the various first-generation products, and significantly simplifies the implantation process. We were also impressed with the clinical experience with these implants in South Africa."

Clinical Experience With the Kineflex(TM)

The SpinalMotion Kineflex lumbar disc and the Kineflex-C cervical disc are designed to offer key advantages over first-generation artificial disc implants. The technology preserves motion with low wear, and features a proprietary, straight-forward implant technique that includes specialized instruments for accurate placement.

The Kineflex discs are currently approved for sale in South Africa, where they were developed. Since October 2002, over 375 Kineflex discs have been implanted in over 300 patients, with over 100 Kineflex-C discs implanted in 75 patients. Preliminary outcome data on the lumbar cases has been reported at the Spine Arthroplasty Society (SAS) meetings in 2003 and 2004, and an update will be presented at the 2005 annual meeting in early May.

The Spine Market

According to analyst reports, the artificial disc market potential is almost \$4 billion in 2005 and expected to grow to over \$5 billion in 2010.

The National Center for Health Statistics reports that 14% of new patient visits to physician offices (approximately 13 million annually) are for complaints of low back pain. In fact, an estimated 18% of the population has debilitating back pain at any given time.

These demographics, along with the tremendous costs to society and the focus on new treatments, have made spinal implants the fastest growing segment of the orthopedic market.

SpinalMotion is focused exclusively on spinal disc arthroplasty, building upon a design and clinical work conducted initially by Southern

Medical, a spinal implant company in South Africa. SpinalMotion was founded in June 2003. The company is located in Mountain View, California.

Caution: Kineflex and Kineflex-C artificial discs are not available for sale in the U.S.

Any forward-looking statements are subject to risks and uncertainties. Actual results may differ substantially from anticipated results.

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DESCRIPTORS: *United States. Food and Drug Administration

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DIALOG(R) File 16:Gale Group PROMT(R)

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11220325 Supplier Number: 116187857 (THIS IS THE FULLTEXT)

Study may push Charite disc as 1st to market. (Business developments)

The BBI Newsletter, v27, n4, p115(2)

April, 2004

ISSN: ISSN: 1049-4316

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 741

TEXT:

Results of a recent study may help get the first artificial disc to market in the U.S. within the next year and offer patients an alternative to spinal fusion, the traditional standard of care for degenerative disc disease. Data from a two-year clinical study of patients implanted with the Charite Artificial Disc, developed by DePuy Spine (Rayruham, Massachusetts), a Johnson & Johnson (New Brunswick, New Jersey) company, indicate these patients experienced earlier pain reduction in comparison with spinal fusion patients, and they improved or maintained their range of motion.

The findings of the study, sponsored by DePuy Spine, were presented at the annual meeting of the American Association of Neurological Surgeons (Rolling Meadows, Illinois)/Congress of Neurological Surgeons (Schaumburg, Illinois) section on disorders of the spine and peripheral nerves, held in San Diego, California. The randomized prospective clinical trial supports a premarket approval application (PMA) the company submitted to the FDA in hopes of becoming the first firm in the U.S. to have an artificial disc on the market. That PMA received "expedited review" status.

If approved by the FDA, the Charite would provide doctors and patients an alternative to lumbar spinal fusion surgery, which may reduce or block back pain but limits a patient's range of motion and may unnaturally stress adjacent anatomy. Lumbar spinal fusion surgery is performed on more than 200,000 people each year in the U.S.

The Charite is comprised of two components: a pair of endplates made of cobalt chromium, inserted in the space between the vertebrae and fixed in place via tiny teeth; then, after seating, a polyethylene material is inserted between the plates to create a disc providing both vertebral separation and flexibility. The procedure is done with an open surgical approach through a small abdominal incision to reach the spine. The particular approval sought is for degenerative disc disease at a single level.

In the study, both the patients implanted with the Charite and those receiving spinal fusion experienced improvement in pain and functional test scores compared with their pre-operative status. However, the study found that patients implanted with the Charite improved more quickly, and their

pain and functional test scores were statistically superior to those of the fusion patients at all points through 12 months, and numerically superior at 24 months. Additionally, on average, patients implanted with the artificial disc were discharged from the hospital a half-day sooner than fusion patients.

Patients were evaluated immediately following surgery, again at six weeks, and at three, six, 12 and 24 months. The company noted that more than 90% of patients were seen at key follow-up time points, an important measure for this type of study. "We had a very high rate of patient follow-up," said Bill Christianson, vice president of clinical and regulatory affairs for DePuy Spine. He told BBI that this response rate reflected the hard work of the clinicians who participated in the study. And he noted the importance of the follow-up data "because FDA likes to see high rates of follow-up."

Two-thirds of the 304 patients enrolled in the pivotal study received the Charite, the remainder receiving traditional spinal fusion surgery with an FDA-approved interbody fusion device. Both devices were **implanted** using the anterior surgical technique to minimize surgical variables. At 24 months, 88% of patients **implanted** with the Charite expressed satisfaction with the procedure, compared with 81% of fusion patients. The **disc** has been used to treat more than 6,500 patients internationally since 1987, originally as the flagship product of Link Spine Group (Bradford, **Connecticut**). DePuy acquired Link--and the Charite product--last year for \$325 million, plus milestone payments based on the device's regulatory progress. Christianson predicted that FDA clearance might come in early 2005, possibly as early as late 2004.

A number of other companies are in the race to bring this technology to the U.S. market. They include Medtronic Sofamor Danek (Memphis, Tennessee); Raymedica (Minneapolis, Minnesota); Replication Medical (New Brunswick, New Jersey); Spinal Dynamics (Mercer Island, Washington), a company purchased by Medtronic (Minneapolis, Minnesota) in June 2002; Spine Solutions (New York), which was purchased by Synthes-Stratec (Oberdorf, Switzerland) last year and SpineCore (Summit, New Jersey).

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PUBLISHER NAME: Thomson Healthcare, Inc.

DESCRIPTORS: *Patients--Observations

EVENT NAMES: *330 (Product information); 336 (Product introduction)

GEOGRAPHIC NAMES: *1USA (United States)

PRODUCT NAMES: *3841230 (Neurological Equipment)

INDUSTRY NAMES: HLTH (Healthcare - Medical and Health)

SIC CODES: 3840 (Medical Instruments and Supplies)

NAICS CODES: 33911 (Medical Equipment and Supplies Manufacturing)

TRADE NAMES: Charite disc (Life preserver)_Product introduction; Charite disc (Life preserver)_Product information

37/9/8 (Item 6 from file: 16)

DIALOG(R) File 16:Gale Group PROMT(R)

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10411669 Supplier Number: 100824927 (THIS IS THE FULLTEXT)

Investigational Artificial Lumbar Disc Surgically Implanted for the First Time.

Business Wire, p5714

April 29, 2003

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 708

TEXT:

Business Editors/Health/Medical Writers

RICHMOND, Va.--(BUSINESS WIRE)--April 29, 2003

New artificial disc potentially offers patients who suffer from degenerative disc disease of the low back another option

Medtronic Sofamor Danek today announced the first United States implant of the MAVERICK(TM) Artificial Disc, which kicks off the company's nationwide clinical trial of the investigational medical device. The procedure was performed by Hallett Mathews, M.D., of MidAtlantic Spine Specialists here.

The clinical trial is designed to evaluate the safety and effectiveness of the artificial disc and potentially support an application to the U.S. Food and Drug Administration (FDA). This application could allow the approved future use of the device, which is designed to replace damaged discs in the lumbar, or low-back, region. Approximately 200,000 lumbar surgeries are performed in the United States every year. These surgeries usually entail a fusion, often with the use of spinal instrumentation such as rods, screws and cages. The MAVERICK Artificial Disc could potentially offer another option to patients who suffer from degenerative disc disease. The disc's design concept is based on decades of total joint arthroplasty experience.

Degenerative disc disease (DDD) is part of the natural process of growing older. As people age, their intervertebral discs lose their flexibility, elasticity and shock-absorbing characteristics. Discs are gel-like cushions that act as shock absorbers between each of the bones of the spine. For approximately half of the population age 40 and over, this process can cause several different symptoms, including back pain, nerve root pathology and spinal cord compression. These symptoms are caused by worn out discs, which are a source of pain because they do not function as well as they once did -- as they shrink, the space available for the nerve roots and the spinal cord also shrinks.

For people who suffer from degenerative **disc** disease and who do not respond to conservative treatment, surgery may be recommended. The most common form of surgery for treating degenerative **disc** disease in the lumbar spine (back) is a spinal fusion. During a fusion procedure, the degenerated **disc** is removed and a bone graft, taken either from the patient's iliac crest (hip area) or a donor, or a bone graft substitute, is inserted between the two vertebrae located above and below the removed **disc**. Often, metal **implants** are then **attached** to the two **vertebrae** to stabilize the area until the bone graft can fuse to the vertebrae, creating one solid piece of bone.

The purpose of the clinical trial is to compare the outcomes of patients who receive an artificial disc with those of patients who undergo a traditional lumbar fusion. Patients who enroll in the clinical study will be randomly assigned a treatment group. Approximately two-thirds of the patients will receive the MAVERICK Artificial Disc and one-third of the patients will receive the control treatment.

Patients who meet specific inclusion and exclusion criteria will be considered for this study. A few of these criteria are as follows:

- Between the ages of 18 and 70, who are skeletally mature
- Not pregnant, nursing or planning to become pregnant within a year following surgery
- Have not responded to non-operative treatment for a period of six months
- Diagnosed with degenerative disc disease, with degeneration confirmed by patient history
- Are willing to comply with the study plan
- Have one or more of the following conditions as documented by CT, MRI or plain x-rays:
 - Modic changes
 - High-intensity zones in the annulus
 - Loss of disc height
 - Decreased hydration

All potential candidates are subject to the above and additional non-listed list clinical trial criteria.

Medtronic, Inc. (NYSE:MDT), headquartered in Minneapolis, is the world's leading medical technology company, providing lifelong solutions for people with chronic disease. Medtronic Sofamor Danek, headquartered in Memphis, Tenn., develops and manufactures products that treat a variety of disorders of the cranium and spine, including traumatically induced conditions, degenerative conditions, deformities and tumors. For more information about the lumbar spine, visit www.back.com/clinicaltrial.

CAUTION: Investigational Device, limited by Federal (or United States) law to investigational use.

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PUBLISHER NAME: Business Wire

COMPANY NAMES: *Medtronic Inc.

DESCRIPTORS: *Surgical equipment and supplies industry

GEOGRAPHIC NAMES: *1USA (United States)

INDUSTRY NAMES: BUS (Business, General); BUSN (Any type of business)

TICKER SYMBOLS: MDT

37/9/20 (Item 5 from file: 636)

DIALOG(R) File 636:Gale Group Newsletter DB(TM)

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05378923 Supplier Number: 92199562 (THIS IS THE FULLTEXT)

Combo May Replace Discs.

Medical Materials Update, v9, n8, p0

Sept, 2002

ISSN: ISSN: 1077-3436

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 688

TEXT:

University of California at San Francisco Medical Center (UCSF, San Francisco, CA 94143; Tel: 415/476-9000) orthopedic surgeons are investigating a stainless steel and plastic implant made by Spine Solutions, Inc. of New York that may replace damaged lower back discs. European patients who have received the product in place of degenerated discs have reported significant improvement in back and leg pain after a minimum of 7 yr of follow-up, says UCSF professor of orthopedic surgery and lead investigator, David S. Bradford. In European clinical trials, the steel-polymer combo alleviated disc-related lower back pain while maintaining spine mobility. It also eliminated the need for fusion of the lower spine, Bradford says.

The French-developed artificial disc, called Prodisc, has two porous cobalt-chrome plates, with stabilizing keels that integrate into adjacent vertebrae, and a polyethylene ball-bearing core. The core functions on a ball-and-socket principle to fulfill the role of healthy discs-which permit limited motion and flexibility, while maintaining stability in specific segments of the spine and absorbing and distributing load.

UCSF Medical Center is one of 13 centers currently evaluating Prodisc, which replaces **discs** damaged by degeneration, bulging, herniation, or thinning. The objective of the randomized clinical trial, which will enroll approx. 510 patients over 4 yr, is to compare the safety and effectiveness of the Prodisc **implant** to spinal fusion surgery. In fusion, the mainstay of surgical treatment for low back pain caused by degenerative **disc** disease (DDD), surgeons use rods and screws **attached** to the bones of the **spine** to hold them until the bones heal together.

The combination of metal and polymer materials could provide a much-needed alternative to spinal fusion. While fusion of the lumbar spine

has increased at the highest rate of any spinal procedure in the last 10 yr, advisability for patients, techniques, and results remain controversial and unclear, according to Bradford. The ability of the bone to heal or fuse varies. In addition, spinal fusion at one or more levels can cause stiffness and decreased motion in the spine and more stress to be transferred to adjacent levels of the spine. Consequently, not all patients have a successful outcome, Bradford says.

"Most important, fusion is not targeted toward restoration of normal structure and function," the doctor says. "This prospective, randomized study will tell us if the Prodisc can eliminate back pain by preserving or restoring motion in the spine, restoring the structure and height of damaged vertebrae, and restoring the normal bio-mechanics of the lumbar spine."

The implants are suited to patients with degenerative disc disease at one or two levels of the spine. Patients should be between the ages of 18 and 60 and are eligible for the trial if they have failed at least 6 mo of conservative therapy. Some patients will receive the Prodisc, while others will receive the currently accepted treatment, spinal fusion.

Back pain is the most common ailment of the working-age adult, affecting more than four million Americans each year. It is estimated that treatment of lower back pain in the United States costs more than \$100 billion a year. While most acute episodes of low back pain respond well to non-operative treatment, the management of chronic low back pain remains a difficult challenge, says Bradford.

The rate of back surgeries, including fusion of the spine, has increased by more than 600% between 1979 and 1990. In addition to spinal fusion, current treatments include disc excision (discectomy) and the use of injections, electrothermal therapies, and implanted neural stimulators and medication dispensers.

In addition to artificial disc replacement, researchers in the spinal disorders division at UCSF Medical Center are also investigating biomaterial techniques such as cellular and molecular disc regeneration and intervertebral disc arthroplasty or artificial joint creation. That may include replacing only the center of the disc, the nucleus, according to the UCSF researchers.

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PUBLISHER NAME: Business Communications Company, Inc.

INDUSTRY NAMES: BIO (Biotechnology); BUSN (Any type of business); DRUG (Pharmaceuticals and Cosmetics)

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Set	Items	Description
S1	236	AU=(LINK H? OR LINK, H?)
S2	21	AU=(MCAFEE P? OR MCAFEE, P?)
S3	10	S1 AND S2
S4	9	S3 AND (SPINAL? OR SPINE? OR VERTEBRA? OR INTERVERTEBRA?)
S5	9	S4 AND (PROSTHE? OR IMPLANT?)

? show files

File 347:JAPIO Nov 1976-2005/Oct(Updated 060203)

(c) 2006 JPO & JAPIO

File 350:Derwent WPIX 1963-2006/UD,UM &UP=200613

(c) 2006 Thomson Derwent

5/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

017614476 **Image available**

WPI Acc No: 2006-125731/200613

XRPX Acc No: N06-108806

**Set of instruments for preparation of space for intervertebral disk
implant , comprising specifically shaped guide element**

Patent Assignee: CERVITECH INC (CERV-N)

Inventor: **LINK H D ; MCAFEE P C**

Number of Countries: 111 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200610444	A1	20060202	WO 2005EP7253	A	20050705	200613 B

Priority Applications (No Type Date): US 2004897404 A 20040723

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200610444 A1 G 24 A61B-017/17

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX
MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN
TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE
SI SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): WO 200610444 A1

NOVELTY - In a first step the damaged **intervertebral** disk is removed from the **spine** and a guide element (3) inserted into the gap in a second step. The guide element (3) has the same height (1) as the disk and is provided with structured outer surfaces (7) for a better grip. An extension at the tip of the router can be inserted into a groove (5) at the front (8) of the element (3) facilitating a precise preparation of spaces for the flanges located at the rear of the **implant** .

USE - The specifically shaped guide element is part of a set of instruments for the preparation of a space for an **intervertebral** disk **implant** .

ADVANTAGE - The disk can be precisely inserted. The surrounding tissue is protected from injuries.

DESCRIPTION OF DRAWING(S) - The drawing shows a perspective view of the arrangement.

Intervertebral gap (1)

Vertebrae (2)

Guide element (3)

Positioning device (4)

Groove (5)

Handle (6)

Projections (7)

Front surface (8)

pp; 24 DwgNo 3/5

Title Terms: SET; INSTRUMENT; PREPARATION; SPACE; **INTERVERTEBRAL** ; DISC;

IMPLANT ; COMPRISE; SPECIFIC; SHAPE; GUIDE; ELEMENT

Derwent Class: P31

International Patent Class (Main): A61B-017/17

International Patent Class (Additional): A61B-017/16

File Segment: EngPI

5/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

017334515 **Image available**
WPI Acc No: 2005-658156/200567
XRPX Acc No: N05-539362

Cervical intervertebral prosthesis for inserting between vertebrae of cervical spine , has securing plate provided as separate portion unconnected to cover plate

Patent Assignee: CERVITECH INC (CERV-N)
Inventor: **LINK H D ; MCAFEE P C**
Number of Countries: 109 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050222682	A1	20051006	US 2004814783	A	20040401	200567 B
WO 200594720	A2	20051013	WO 2005EP3252	A	20050329	200567

Priority Applications (No Type Date): US 2004814783 A 20040401

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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US 20050222682	A1		4	A61F-002/44	
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WO 200594720	A2	G		A61F-002/00	
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Designated States (National): 'AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ
NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT
TZ UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI
SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): US 20050222682 A1

NOVELTY - An upper cover plate (3) and a lower cover plate (4) are connected to one of the two adjacent **vertebral** bodies (1,2). A securing plate (12), which secures the cover plate, is fastened to ventral surface of **vertebral** body. The securing plate is a separate portion unconnected to the cover plate. The cover plate is provided with a limit stop surface (11) facing in a dorsal direction.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a securing plate positioning instrument.

USE - For inserting between **vertebrae** of cervical **spine** .

ADVANTAGE - Obtains secure positioning by placing securing plate on **vertebral** body with the edges of securing plate and **vertebral** body lie on one another. Simplifies positioning by providing securing plate with edge that corresponds to the edge of **vertebral** body.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional drawing of a cervical **intervertebral prosthesis** .

Vertebral bodies (1,2)

Upper cover plate (3)

Lower cover plate (4)

Limit stop surface (11)

Securing plate (12)

pp; 4 DwgNo 1/3

Title Terms: CERVIX; **INTERVERTEBRAL** ; **PROSTHESIS** ; INSERT; **VERTEBRA** ;
CERVIX; **SPINE** ; SECURE; PLATE; SEPARATE; PORTION; UNCONNECTED; COVER;
PLATE

Derwent Class: P31; P32

International Patent Class (Main): A61F-002/00; A61F-002/44
International Patent Class (Additional): A61B-017/17; A61F-002/46
File Segment: EngPI

5/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

017198243 **Image available**
WPI Acc No: 2005-521870/200553
XRPX Acc No: N05-426329

**Cervical prosthesis has prosthesis core which forms connection
between upper and lower cover plate, such that lower cover plate has flat
bottom surface and top convex surface in sagittal section**

Patent Assignee: CERVITECH INC (CERV-N)
Inventor: KELLER A; LINK H D ; MCAFEE P C
Number of Countries: 108 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050171605	A1	20050804	US 2004768713	A	20040202	200553 B
WO 200572658	A2	20050811	WO 2005EP458	A	20050118	200553

Priority Applications (No Type Date): US 2004768713 A 20040202
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050171605	A1		6	A61F-002/44	
WO 200572658	A2	G		A61F-002/44	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ
NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ
UA UG US UZ VC VN YU ZA ZM ZW
Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI
SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): US 20050171605 A1

NOVELTY - A **prosthesis** core forms a connection between an upper
cover plate (11) and lower cover plate, such that lower cover plate has
flat bottom surface and top convex surface in the sagittal section.

USE - Cervical **prosthesis**.

ADVANTAGE - Ensure a secure hold of the **prosthesis** on the bone.
Promotes bone growth and intimate contact between bone and **prosthesis**

DESCRIPTION OF DRAWING(S) - The figure shows the **prosthesis**
located in the **intervertebral** space.

Upper cover plate (11)

Milling disk (22)

pp; 6 DwgNo 3/13

Title Terms: CERVIX; **PROSTHESIS** ; **PROSTHESIS** ; CORE; FORM; CONNECT; UPPER
; LOWER; COVER; PLATE; LOWER; COVER; PLATE; FLAT; BOTTOM; SURFACE; TOP;
CONVEX; SURFACE; SAGITTAL; SECTION

Derwent Class: P31; P32

International Patent Class (Main): A61F-002/44
International Patent Class (Additional): A61B-017/16
File Segment: EngPI

5/5/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

017111132 **Image available**

WPI Acc No: 2005-435475/200544

Related WPI Acc No: 2003-691511

XRPX Acc No: N05-353379

**Set of tools and devices for preparation of bones and precise insertion
of implant replacing intervertebral disk**

Patent Assignee: CERVITECH INC (CERV-N)

Inventor: KELLER A; **LINK H D** ; **MCAFEE P C**

Number of Countries: 108 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200555835	A2	20050623	WO 2004EP13346	A	20041124	200544 B

Priority Applications (No Type Date): US 2003731432 A 20031210; US
2003731431 A 20031210

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200555835 A2 E 20 A61B-017/02

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ
NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ
UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IS IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK
SL SZ TR TZ UG ZM ZW

Abstract (Basic): WO 200555835 A2

NOVELTY - A rectangular element (11) matching the size of the space
for the **implant** is temporarily inserted between the two adjacent
vertebrae (2) and held at an adjusting bar. A guide element (34) with
a square-shaped (31) and a circular bore (36) is pushed onto the bar
and can be used for guiding a rasp inserted into the circular bore
(36). When the area within reach of the tool is processed the guide
element (34) can be rotated around the bar in order to process the
remaining surface. The temporarily inserted element (11) can now be
removed and the **implant** inserted into the space kept open by a
suitable spreading tool.

USE - The design can be used for a set of tools and devices for the
preparation of bones and the precise insertion of an **implant**
replacing an **intervertebral** disk in particular at the cervical **spine**

ADVANTAGE - All steps of the replacement process can be precisely
performed.

DESCRIPTION OF DRAWING(S) - The drawing shows a perspective view of
the adjusting and guide element.

Vertebrae (2)

Rectangular element (11)

Square segment (31)

Guide element (34)

Circular bore (36)

Longitudinal axes (37, 38)

pp; 20 DwgNo 2/18

Title Terms: SET; TOOL; DEVICE; PREPARATION; BONE; PRECISION; INSERT;
IMPLANT ; REPLACE; **INTERVERTEBRAL** ; DISC

Derwent Class: P31; P32

International Patent Class (Main): A61B-017/02

International Patent Class (Additional): A61F-002/46
File Segment: EngPI

5/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

016982366
WPI Acc No: 2005-306680/200532
Cervical vertebral disc prosthesis has a cover attached to the disc
of specific design - NoAbstract
Patent Assignee: CERVITECH INC (CERV-N)
Inventor: KELLER A; LINK H D ; MCAFEE P C
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
BR 200302378 A 20050329 BR 20032378 A 20030407 200532 B
Priority Applications (No Type Date): BR 20032378 A 20030407
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
BR 200302378 A 1 A61F-002/44
Title Terms: CERVIX; VERTEBRA ; DISC; PROSTHESIS ; COVER; ATTACH; DISC;
SPECIFIC; DESIGN; NOABSTRACT
Derwent Class: P32
International Patent Class (Main): A61F-002/44
File Segment: EngPI

5/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

016949153 **Image available**
WPI Acc No: 2005-273462/200528
XRPX Acc No: N05-224605
Cervical intervertebral prosthesis for replacing an intervertebral
disk between two vertebrae comprises a sliding joint in which the
ventral edge of an upper sliding surface has a lower position than the
dorsal edge
Patent Assignee: CERVITECH INC (CERV-N)
Inventor: KELLER A; LINK H ; MCAFEE P C
Number of Countries: 108 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
WO 200532431 A1 20050414 WO 2004EP9089 A 20040813 200528 B
Priority Applications (No Type Date): US 2003690848 A 20031002
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200532431 A1 G 16 A61F-002/44
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ
NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ
UA UG US UZ VC VN YU ZA ZM ZW
Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL
SZ TR TZ UG ZM ZW

Abstract (Basic): WO 200532431 A1

NOVELTY - Cervical **intervertebral prosthesis** comprises a lower cover plate (11), an upper cover plate (12), and a sliding joint located between the lower and upper cover plates and formed by a lower convex sliding surface (25) and an upper concave sliding surface (26). The ventral edge (35) of the upper sliding surface has a lower position than the dorsal edge (36).

DETAILED DESCRIPTION - Preferred Features: The ventral edge of the lower sliding surface has a lower position than the dorsal edge. The tangential angle (41) at the ventral edge is at least 3degrees greater than the tangential angle (42) at the dorsal edge.

USE - For replacing an **intervertebral** disk between two **vertebrae**

ADVANTAGE - The relative movement of the **vertebrae** is considerably closer to the natural pattern.

DESCRIPTION OF DRAWING(S) - The drawing shows a sagittal section through the **prosthesis**.

lower cover plate (11)
upper cover plate (12)
lower convex sliding surface (25)
upper concave sliding surface (26)
ventral edge (35)
dorsal edge (36)
tangential angle (41, 42)
pp; 16 DwgNo 3/3

Title Terms: CERVIX; **INTERVERTEBRAL** ; **PROSTHESIS** ; REPLACE;
INTERVERTEBRAL ; DISC; TWO; **VERTEBRA** ; COMPRISE; SLIDE; JOINT; VENTRAL;
EDGE; UPPER; SLIDE; SURFACE; LOWER; POSITION; DORSAL; EDGE

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

5/5/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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016589828 **Image available**

WPI Acc No: 2004-748563/200473

Related WPI Acc No: 2004-748562

XRPX Acc No: N04-591426

Cervical intervertebral prosthesis used for replacing a cervical intervertebral disk comprises a dorsolateral boundary having a greater minimum distance from a dorsal corner than an anterolateral boundary from a ventral corner

Patent Assignee: CERVITECH INC (CERV-N)

Inventor: KELLER A; **LINK H** ; **MCAFEE P C** ; **LINK H D**

Number of Countries: 109 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200489259	A1	20041021	WO 2004EP1498	A	20040217	200473 B
EP 1610731	A1	20060104	EP 2004711582	A	20040217	200603
			WO 2004EP1498	A	20040217	

Priority Applications (No Type Date): EP 20038127 A 20030407

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200489259 A1 G 23 A61F-002/44

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ

CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ
NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ
UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR
TZ UG ZM ZW

EP 1610731 A1 G A61F-002/44 Based on patent WO 200489259

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

Abstract (Basic): WO 200489259 A1

NOVELTY - Cervical **intervertebral prosthesis** comprises a covering plate provided with a connecting surface for connecting to a **vertebral** body. The dorsolateral boundary (24) of the connecting surface of each adjacent dorsal corner (29) of an imaginary right angle (21) describing the peripheral contour (14) of the top plate has a greater minimum distance (28) than the anterolateral boundary of the adjacent ventral corners (27).

DETAILED DESCRIPTION - Preferred Features: The minimum distance of the boundary of the connecting surface from the dorsal corners is at least 1.3 times longer than the minimum distance from the ventral corners.

USE - Used for replacing a cervical **intervertebral** disk.

ADVANTAGE - Utilization of the available space is improved.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of the connecting surface and edge contour.

peripheral contour (14)

imaginary right angle (21)

dorsolateral boundary (24)

ventral corner (27)

minimum distance (28)

dorsal corner (29)

pp; 23 DwgNo 10/10

Title Terms: CERVIX; **INTERVERTEBRAL** ; **PROSTHESIS** ; REPLACE; CERVIX;
INTERVERTEBRAL ; DISC; COMPRISE; BOUNDARY; GREATER; MINIMUM; DISTANCE;
DORSAL; CORNER; BOUNDARY; VENTRAL; CORNER

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

5/5/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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016589827 **Image available**

WPI Acc No: 2004-748562/200473

Related WPI Acc No: 2004-748563

XRPX Acc No: N04-591425

Intervertebral prosthesis for an intervertebral space of the cervical spine comprises a surface for resting on a vertebral body and having a convex curvature in the frontal plane

Patent Assignee: CERVITECH INC (CERV-N)

Inventor: KELLER A; **LINK H** ; **MCAFEE P C** ; **LINK H D**

Number of Countries: 109 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200489258	A1	20041021	WO 2004EP1029	A	20040204	200473 B
EP 1610730	A1	20060104	EP 2004707931	A	20040204	200603

Priority Applications (No Type Date): EP 20038127 A 20030407

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200489258 A1 G 32 A61F-002/44

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ
CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ
NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ
UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR
GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR
TZ UG ZM ZW

EP 1610730 A1 G A61F-002/44 Based on patent WO 200489258

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

Abstract (Basic): WO 200489258 A1

NOVELTY - **Intervertebral prosthesis** (7) for an **intervertebral** space of the cervical **spine** defined by the end plates (12, 13) of adjoining **vertebral** bodies comprises at least one **prosthesis** surface (9, 11) for resting on a **vertebral** body surface and having a lateral extension up to curved edge zones (4) of the end plates. The convex curvature of this **prosthesis** surface in the frontal plane is at least equal to the corresponding curvature of the surface of the end plates.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an instrumentarium for inserting the above **prosthesis**. Preferred Features:

USE - For an **intervertebral** space of the cervical **spine**.

ADVANTAGE - Force transfer between the **prosthesis** and the **vertebral** body end plates is improved while conserving natural bone substance.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-section through a **prosthesis** within a frontal plane.

edge zone (4)

prosthesis (7)

central region (8)

prosthesis surface (9, 11)

end plate (12, 13)

pp; 32 DwgNo 4/23

Title Terms: **INTERVERTEBRAL** ; **PROSTHESIS** ; **INTERVERTEBRAL** ; SPACE;

CERVIX; **SPINE** ; COMPRISE; SURFACE; REST; **VERTEBRA** ; BODY; CONVEX; CURVE ; FRONT; PLANE

Derwent Class: P31; P32

International Patent Class (Main): A61F-002/44

International Patent Class (Additional): A61B-017/16

File Segment: EngPI

5/5/9 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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016531615 **Image available**

WPI Acc No: 2004-690181/200467

XRPX Acc No: N04-546902

Prosthesis for replacing cervical intervertebral disk, has cover plate having connection surface with dorsolateral limit from dorsal

corner of imaginary rectangle having greater minimum distance than
anterolateral limit from ventral corners

Patent Assignee: CERVITECH INC (CERV-N)

Inventor: KELLER A; LINK H D ; MCAFEE P C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040199253	A1	20041007	US 2003407946	A	20030407	200467 B

Priority Applications (No Type Date): US 2003407946 A 20030407

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040199253	A1		6	A61F-002/44	

Abstract (Basic): US 20040199253 A1

NOVELTY - The **prosthesis** includes a cover plate (10) having a connection surface (10) with a dorsolateral limit from an adjacent dorsal corner of an imaginary rectangle having greater minimum distance than an anterolateral limit from the adjacent ventral corners. The imaginary rectangle is circumscribing the circumferential contour of the cover plate.

USE - For replacing cervical **intervertebral** disk.

ADVANTAGE - Permits the best possible utilization of space.
Prevents causing irritations on the esophagus and large blood vessels when the **prosthesis** is used.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of the cervical **intervertebral** disk **prosthesis**.

Core (2)

Connection surface (10)

Cover plate (10)

Edge (14)

Oblique transition surface (25)

pp; 6 DwgNo 2/10

Title Terms: **PROSTHESIS** ; REPLACE; CERVIX; **INTERVERTEBRAL** ; DISC; COVER;
PLATE; CONNECT; SURFACE; LIMIT; DORSAL; CORNER; IMAGINARY; RECTANGLE;
GREATER; MINIMUM; DISTANCE; LIMIT; VENTRAL; CORNER

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

?

Set	Items	Description
S1	2873	AU=(LINK H? OR LINK, H?)
S2	511	AU=(MCAFEE P? OR MCAFEE, P?)
S3	1	AU='MACAFEE P C'
S4	8	S1 AND S2:S3
S5	3	RD (unique items)
S6	163	S1:S3 AND (SPINE? ? OR SPINAL? OR INTERVERTEBRA? OR VERTEB- RA?) AND (PROSTHE? OR IMPLANT? OR REPLACEMENT? OR ARTHROPLAST- ?)
S7	155	S6 NOT S4
S8	70	RD (unique items)
S9	119	S1:S3 AND (SPINE? ? OR SPINAL? OR INTERVERTEBRA? OR VERTEB- RA?)/TI,AB AND (PROSTHE? OR IMPLANT? OR REPLACEMENT? OR ARTHR- OPLAST?)/TI,AB
S10	117	S9 NOT S4
S11	43	RD (unique items)
File	155	MEDLINE(R) 1951-2006/Feb 27 (c) format only 2006 Dialog
File	5	Biosis Previews(R) 1969-2006/Feb W3 (c) 2006 BIOSIS
File	73	EMBASE 1974-2006/Feb 27 (c) 2006 Elsevier Science B.V.
File	34	SciSearch(R) Cited Ref Sci 1990-2006/Feb W3 (c) 2006 Inst for Sci Info
File	434	SciSearch(R) Cited Ref Sci 1974-1989/Dec (c) 1998 Inst for Sci Info

5/5/1 (Item 1 from file: 155)
DIALOG(R) File 155: MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

17974315 PMID: 14560185

Biomaterial optimization in total disc arthroplasty.

Hallab Nadim; Link Helmut D ; McAfee Paul C

Rush Presbyterian St. Luke's Medical Center, Chicago, Illinois, USA.
nhallab@rush.edu

Spine (United States) Oct 15 2003, 28 (20) pS139-52, ISSN 1528-1159
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Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

STUDY: Knowledge gained through the clinical history of total joint replacement materials combined with the current promise of new biomaterials provides improved guidelines for biomaterial selection in total disc arthroplasty. OBJECTIVES: The following will detail: 1) current biomaterials technology; 2) how current designs of total disc arthroplasty seek to optimize implant performance through judicious biomaterial selection; and 3) what technical obstacles and clinical concerns remain. METHODS: Metals and polymers remain the central material components of state-of-the-art total joint arthroplasties. Polymers provide low friction surfaces for articulating bearings and some degree of shock absorption. Metals provide appropriate material properties such as high strength, ductility, fracture toughness, hardness, corrosion resistance, formability, and biocompatibility necessary for use in load-bearing roles required total disc replacement. There are three principal metal alloys used in orthopaedics and particularly in total joint replacement: 1) titanium based alloys; 2) cobalt based alloys; and 3) stainless steel alloys. Alloy specific differences in strength, ductility, and hardness generally determine which of these three alloys is used for a particular application or implant component. RESULTS: Current designs. Two examples of current lumbar (Charite and Prodisc) and cervical (Bryan and Prestige) disc replacements are compared. The similarities and differences in the biomaterials used for each demonstrate prevailing consensus and some idea of how to best optimize implant performance through biomaterial selection. CONCLUSION: The primary factors governing total disc arthroplasty biomaterials are similar to those of all total joint arthroplasties: generation of wear debris is the primary source of implant degradation, and the subsequent tissue reaction to such debris is the primary factor limiting the longevity of joint replacement prostheses. Particulate debris generated by wear, fretting, or fragmentation induces the formation of an inflammatory reaction, which at a certain point promotes a foreign-body granulation tissue response that has the ability to invade the bone-implant interface. This commonly results in progressive, local bone loss that threatens the fixation of both cemented and cementless devices alike. All metal alloy implants corrode in vivo. When severe, the degradative process may reduce structural integrity of the implant, and the release of corrosion products is potentially toxic to the host. The corrosion resistance of implant alloys is primarily due to the formation of passive oxide films to prevent significant electrochemical dissolution from taking place. The result of this knowledge is a consensus of opinion as to which materials are best suited for use in current total disc arthroplasty designs, where most total disc replacement designs incorporate cobalt-chromium-molybdenum alloy endplates articulating internally on a relatively soft polymeric core and externally coated with titanium or titanium alloy for enhanced bone fixation.

Descriptors: *Arthroplasty, Replacement--instrumentation--IS; *Biocompatible Materials--standards--ST; *Intervertebral Disk--surgery--SU; Alloys; Arthroplasty, Replacement--methods--MT; Biocompatible Materials--adverse effects--AE; Biocompatible Materials--chemistry--CH; Cobalt; Humans; Hypersensitivity--etiology--ET; Neoplasms--etiology--ET; Prostheses and Implants--adverse effects--AE; Stainless Steel; Titanium

CAS Registry No.: 0 (Alloys); 0 (Biocompatible Materials); 12597-68-1 (Stainless Steel); 7440-32-6 (Titanium); 7440-48-4 (Cobalt)

Record Date Created: 20031015

Record Date Completed: 20050613

5/5/2 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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16612487 PMID: 15541683

Clinical experience with the new artificial cervical PCM (Cervitech) disc.

Pimenta Luiz; McAfee Paul C; Cappuccino Andy; Bellera Fernando P; **Link Helmut D**

Santa Rita Hospital, Rua Cibatao 1190, Vila Mariana, Sao Paulo, Brazil.
spine journal - official journal of the North American Spine Society (United States) Nov-Dec 2004, 4 (6 Suppl) p315S-321S, ISSN 1529-9430
Journal Code: 101130732

Publishing Model Print

Document type: Clinical Trial; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

The results of a pilot study performed between December 2002 and October 2003 in which 82 cervical disc arthroplasties were implanted in 53 patients are reviewed in detail. Visual Analog Scale (VAS) pain scale, Neck Disability Index (NDI), and Treatment Intensity Gradient Test (TIGT) scales were evaluated as were static and dynamic radiographs. Significant improvements in all scales were seen postoperatively. One device migration of 4 millimeters was seen at 3 months and observed. Eighty percent of patients had a good or excellent result at one week, improving to ninety percent of patients being judged to have a good or excellent result by one month (Odom's criteria), which then remained at ninety percent at 3 months.

Tags: Female; Male; Research Support, Non-U.S. Gov't

Descriptors: *Arthroplasty, Replacement--instrumentation--IS; *Intervertebral Disk--surgery--SU; *Joint Prosthesis; *Osteoarthritis--surgery--SU; Adult; Aged; Cervical Vertebrae; Humans; Middle Aged; Pain Measurement; Treatment Outcome

Record Date Created: 20041115

Record Date Completed: 20050208

5/5/3 (Item 3 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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16612484 PMID: 15541680

Choosing a cervical disc replacement.

Link Helmut D ; McAfee Paul C ; Pimenta Luiz

Cervitech Inc., 300 Roundhill Drive, Rockaway NJ 07866, USA.
HD.Link@linkhh.de

spine journal - official journal of the North American Spine Society (United States) Nov-Dec 2004, 4 (6 Suppl) p294S-302S, ISSN 1529-9430

Journal Code: 101130732

Publishing Model Print

Document type: Journal Article; Review; Review, Tutorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

BACKGROUND CONTENT: Three important basic scientific studies are presented that measured the volumetric density of longitudinal bony columns within the cervical vertebra. The most solid bone is lateral, adjacent to the uncovertebral joints in a radial pattern. PURPOSE: To characterize the best footprint, profile and biomaterials to construct a cervical disc replacement. STUDY DESIGN: A compilation of biomechanical and anatomical basic scientific studies. METHODS: Microcomputed tomographic imaging, trabecular density and mineral distribution were quantitated from human cervical vertebra. RESULTS: The lateral portions of the cervical vertebra are subjected to higher bending loads than the lumbar vertebral bodies. Therefore, the optimal prosthesis needs to be anchored in the lateral uncovertebral bone. To reduce the incidence of cervical subsidence, the prosthesis needs to be more rectangular than round to take advantage of the radially oriented lateral trabeculae. TiCaP (titanium/calcium phosphate) (Cervitech, Inc., Rockaway, NJ) bony ingrowth coating leads to 10% to 15% greater bony integration than plasma-sprayed titanium. TiCaP causes a supersaturated solution of CaP at the metal-bone interface, which enables reprecipitation of hydroxyapatite and superior bony integration. The optimum pore size of the ingrowth coating of the lumbar spine is 75 to 300 microns, whereas in the cervical spine the optimal ingrowth coating is 20 to 30 microns. This is an order of magnitude lower in pore size to match the smaller cervical trabecular architecture. CONCLUSIONS: Kinematic considerations for the cervical spine show the load is 1/9th the load carried by the lumbar spine or 50 N per segment. Knowing the sliding distance and wear characteristics of conventional biomaterials (ultrahigh molecular weight polyethylene and cobalt chrome) demonstrates that the generation of particulate debris should be a very minor consideration with cervical arthroplasty. (43 Refs.)

Descriptors: *Arthroplasty, Replacement--instrumentation--IS; *Intervertebral Disk--surgery--SU; *Joint Prosthesis; Arthroplasty, Replacement--methods--MT; Biomechanics; Cervical Vertebrae; Humans; Prosthesis Design; Weight-Bearing

Record Date Created: 20041115

Record Date Completed: 20050208

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11/3/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

19963923 PMID: 15767888

The indications for interbody fusion cages in the treatment of spondylolisthesis: analysis of 120 cases.

McAfee Paul C ; DeVine John G; Chaput Christopher D; Prybis Brad G; Fedder Ira L; Cunningham Bryan W; Farrell Dennis J; Hess Samuel J; Vigna Franco E

Spine and Scoliosis Center, St. Joseph's Hospital, Baltimore, MD, USA.
mack8132@aol.com

Spine (United States) Mar 15 2005, 30 (6 Suppl) pS60-5, ISSN 1528-1159--Electronic Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

19361742 PMID: 16025025

A prospective, randomized, multicenter Food and Drug Administration investigational device exemption study of lumbar total disc replacement with the CHARITE artificial disc versus lumbar fusion: part II: evaluation of radiographic outcomes and correlation of surgical technique accuracy with clinical outcomes.

McAfee Paul C ; Cunningham Bryan; Holsapple Gwen; Adams Karen; Blumenthal Scott; Guyer Richard D; Dmietriev Anton; Maxwell James H; Regan John J; Isaza Jorge

Spine and Scoliosis Center, St. Joseph's Hospital, Baltimore, Maryland, USA. Mack8132@aol.com

Spine (United States) Jul 15 2005, 30 (14) p1576-83; discussion E388-90, ISSN 1528-1159--Electronic Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: In Process

11/3/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

19361741 PMID: 16025024

A prospective, randomized, multicenter Food and Drug Administration investigational device exemptions study of lumbar total disc replacement with the CHARITE artificial disc versus lumbar fusion: part I: evaluation of clinical outcomes.

Blumenthal Scott; McAfee Paul C ; Guyer Richard D; Hochschuler Stephen H ; Geisler Fred H; Holt Richard T; Garcia Rolando; Regan John J; Ohnmeiss Donna D

Texas Back Institute, Plano, Texas 75093, USA. sblumenthal@texasback.com

Spine (United States) Jul 15 2005, 30 (14) p1565-75; discussion E387-91, ISSN 1528-1159--Electronic Journal Code: 7610646

Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: In Process

11/3/4 (Item 4 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

19339278 PMID: 15897831

Adjacent level intradiscal pressure and segmental kinematics following a cervical total disc arthroplasty : an in vitro human cadaveric model.

Dmitriev Anton E; Cunningham Bryan W; Hu Nianbin; Sell Gregory; Vigna Franco; McAfee Paul C

Orthopaedic Research Laboratory and Department of Orthopaedic Surgery, Union Memorial Hospital, Baltimore, Maryland 21218, USA. aedortho@yahoo.com

Spine (United States) May 15 2005, 30 (10) p1165-72, ISSN 1528-1159

--Electronic Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: In Process

11/3/5 (Item 5 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

17974319 PMID: 14560189

Cervical disc replacement -porous coated motion prosthesis : a comparative biomechanical analysis showing the key role of the posterior longitudinal ligament.

McAfee Paul C ; Cunningham Bryan; Dmitriev Anton; Hu Niabin; Woo Kim Seok; Cappuccino Andy; Pimenta Luiz

St. Joseph Hospital, Scoliosis and Spine Center, Towson, MD 21204, USA. mack8132@aol.com

Spine (United States) Oct 15 2003, 28 (20) pS176-85, ISSN 1528-1159

Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/6 (Item 6 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

17974316 PMID: 14560186

Experimental design of total disk replacement -experience with a prospective randomized study of the SB Charite.

McAfee Paul C ; Fedder Ira L; Saiedy Samer; Shucosky Erin M; Cunningham Bryan W

Spine and Scoliosis Center, St. Joseph's Hospital, Baltimore, Maryland, Towson, MD 21204, USA. mack8132@aol.com

Spine (United States) Oct 15 2003, 28 (20) pS153-62, ISSN 1528-1159

Journal Code: 7610646
Publishing Model Print
Document type: Clinical Trial; Journal Article; Randomized Controlled Trial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/7 (Item 7 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

17974313 PMID: 14560183
General principles of total disc replacement arthroplasty : seventeen cases in a nonhuman primate model.
Cunningham Bryan W; Dmitriev Anton E; Hu Nianbin; McAfee Paul C
Orthopaedic Biomechanics Laboratory, Union Memorial Hospital, Scoliosis and Spine Center, Baltimore, Maryland 21218, USA. bcspine@aol.com
Spine (United States) Oct 15 2003, 28 (20) pS118-24, ISSN 1528-1159
Journal Code: 7610646
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/8 (Item 8 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

17974312 PMID: 14560182
Biomechanical evaluation of total disc replacement arthroplasty : an in vitro human cadaveric model.
Cunningham Bryan W; Gordon Jeffrey D; Dmitriev Anton E; Hu Nianbin; McAfee Paul C
Orthopaedic Biomechanics Laboratory, Union Memorial Hospital, Scoliosis and Spine Center, Baltimore, Maryland 21218, USA. bcspine@aol.com
Spine (United States) Oct 15 2003, 28 (20) pS110-7, ISSN 1528-1159
Journal Code: 7610646
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/9 (Item 9 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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17465358 PMID: 15739532
Multidirectional flexibility analysis of cervical artificial disc reconstruction: in vitro human cadaveric spine model.
Kotani Yoshihisa; Cunningham Bryan W; Abumi Kuniyoshi; Dmitriev Anton E; Ito Manabu; Hu Niabin; Shikinami Yasuo; McAfee Paul C; Minami Akio
Department of Orthopaedic Surgery, Hokkaido University Graduate School of Medicine, Sapporo, Japan. y-kotani@med.hokudai.ac.jp
J Neurosurg Spine (United States) Feb 2005, 2 (2) p188-94, ISSN

1547-5654 Journal Code: 101223545
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

16612478 PMID: 15541674
Prospective randomized study of the Charite artificial disc: data from two investigational centers.
Guyer Richard D; McAfee Paul C ; Hochschuler Stephen H; Blumenthal Scott L; Fedder Ira L; Ohnmeiss Donna D; Cunningham Bryan W
Texas Back Institute, 6300 West Parker Road, Plano, TX 75093, USA.
rguyer@texasback.com
spine journal - official journal of the North American Spine Society (United States) Nov-Dec 2004, 4 (6 Suppl) p252S-259S, ISSN 1529-9430
Journal Code: 101130732
Publishing Model Print
Document type: Clinical Trial; Journal Article; Multicenter Study; Randomized Controlled Trial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

16612468 PMID: 15541664
The indications for lumbar and cervical disc replacement .
McAfee Paul C
Scoliosis and Spine Center, St. Joseph Hospital, O'Dea Medical Building 104, 7505 Osler Drive, Towson, MD 21204, USA. mack8132@aol.com
spine journal - official journal of the North American Spine Society (United States) Nov-Dec 2004, 4 (6 Suppl) p177S-181S, ISSN 1529-9430
Journal Code: 101130732
Publishing Model Print
Document type: Journal Article; Review; Review, Tutorial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/12 (Item 12 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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15466588 PMID: 15346999
Neurological complications of lumbar artificial disc replacement and comparison of clinical results with those related to lumbar arthrodesis in the literature: results of a multicenter, prospective, randomized investigational device exemption study of Charite intervertebral disc. Invited submission from the Joint Section Meeting on Disorders of the Spine and Peripheral Nerves, March 2004.

Geisler Fred H; Blumenthal Scott L; Guyer Richard D; McAfee Paul C ;
Regan John J; Johnson J Patrick; Mullin Bradford
Illinois Neuro-Spine Center at Rush-Copley Medical Center, Aurora,
Illinois 60504, USA. fgeisler@concentric.net
J Neurosurg Spine (United States) Sep 2004, 1 (2) p143-54, ISSN
1547-5654 Journal Code: 101223545
Publishing Model Print
Document type: Clinical Trial; Journal Article; Multicenter Study;
Randomized Controlled Trial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/13 (Item 13 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

15042466 PMID: 14589241
The effect of spinal instrumentation particulate wear debris. an in
vivo rabbit model and applied clinical study of retrieved instrumentation
cases.
Cunningham Bryan W; Orbegoso Carlos M; Dmitriev Anton E; Hallab Nadim J;
Seftor John C; Asdourian Paul; McAfee Paul C
Orthopaedic Research Laboratory, Department of Orthopaedic Surgery, Union
Memorial Hospital, 201 East University Parkway, Baltimore, MD 21218, USA.
bcspine@aol.com
spine journal - official journal of the North American Spine Society (United States) Jan-Feb 2003, 3 (1) p19-32, ISSN 1529-9430
Journal Code: 101130732
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/14 (Item 14 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

14913044 PMID: 12902954
Classification of heterotopic ossification (HO) in artificial disk
replacement .
McAfee Paul C ; Cunningham Bryan W; Devine John; Williams Eric;
Yu-Yahiro Janet
Scoliosis and Spine Center, St Joseph Hospital, Baltimore, Maryland
21204, USA. mack8132@aol.com
Journal of spinal disorders & techniques (United States) Aug 2003, 16
(4) p384-9, ISSN 1536-0652 Journal Code: 101140323
Publishing Model Print
Document type: Evaluation Studies; Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/15 (Item 15 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

14662879 PMID: 12590205

Analysis of porous ingrowth in intervertebral disc prostheses : a nonhuman primate model.

McAfee Paul C ; Cunningham Bryan W; Orbegoso Carlos M; Sefter John C; Dmitriev Anton E; Fedder Ira L

Scoliosis and Spine Center, St. Josephs Hospital, and the Biomechanics Laboratory at Union Memorial Hospital, Baltimore, Maryland 21204-7737, USA.

Spine (United States) Feb 15 2003, 28 (4) p332-40, ISSN 1528-1159
Journal Code: 7610646

Publishing Model Print; Comment in Spine. 2003 Oct 1;28(19) 2304; Comment in PMID 14520048

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/16 (Item 16 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

14602302 PMID: 14589273

Artificial intervertebral discs and beyond: a North American Spine Society Annual Meeting symposium.

Blumenthal Scott L; Ohnmeiss Donna D; Guyer Richard; Hochschuler Stephen; **McAfee Paul** ; Garcia Rolando; Salib Richard; Yuan Hansen; Lee Casey; Bertagnoli Rudolph; Bryan Vincent; Winter Robert

spine journal - official journal of the North American Spine Society (United States) Nov-Dec 2002, 2 (6) p460-3, ISSN 1529-9430

Journal Code: 101130732

Publishing Model Print

Document type: Congresses

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/17 (Item 17 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

14602239 PMID: 14588284

Osseointegration of autograft versus osteogenic protein-1 in posterolateral spinal arthrodesis: emphasis on the comparative mechanisms of bone induction.

Cunningham Bryan W; Shimamoto Norimichi; Sefter John C; Dmitriev Anton E; Orbegoso Carlos M; McCarthy Edward F; Fedder Ira L; **McAfee Paul C**

Orthopaedic Research Laboratory, Union Memorial Hospital, 201 East University Parkway, Baltimore, MD 21218, USA. bcspine@aol.com

spine journal - official journal of the North American Spine Society (United States) Jan-Feb 2002, 2 (1) p11-24, ISSN 1529-9430

Journal Code: 101130732

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/18 (Item 18 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

14581044 PMID: 12634556

The effect of titanium particulate on development and maintenance of a posterolateral spinal arthrodesis: an in vivo rabbit model.

Cunningham Bryan W; Orbegoso Carlos M; Dmitriev Anton E; Hallab Nadim J; Seftor John C; McAfee Paul C

Orthopaedic Research Laboratory, Union Memorial Hospital, Baltimore, MD 21218, USA. bcspine@aol.com

Spine (United States) Sep 15 2002, 27 (18) p1971-81, ISSN 1528-1159
Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/19 (Item 19 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

14444654 PMID: 12384732

Total disc replacement arthroplasty using the AcroFlex lumbar disc: a non-human primate model.

Cunningham Bryan W; Lowery Gary L; Serhan Hassan A; Dmitriev Anton E; Orbegoso Carlos M; McAfee Paul C; Fraser Robert D; Ross Raymond E; Kulkarni Samir S

Orthopedic Biomechanics Laboratory, Department of Orthopaedic Surgery, Union Memorial Hospital, 201 East University Pkwy, Baltimore, MD 21218, USA. bcspine@aol.com

European spine journal - official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society (Germany) Oct 2002, 11 Suppl 2 pS115-23, ISSN 0940-6719 Journal Code: 9301980

Publishing Model Print-Electronic

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/20 (Item 20 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

14281535 PMID: 12089793

[Basic principles of successful implantation of the SB Charite model LINK intervertebral disk endoprosthesis]

Grundlagen einer erfolgreichen Anwendung der LINK Zwischenwirbel-Endoprothese Modell SB Charite.

Buttner-Janz K; Hahn S; Schikora K; Link H D

Vivantes Netzwerk für Gesundheit GmbH, Orthopädische Klinik, Klinikum Hellersdorf, Myslowitzer Strasse 45, 12621 Berlin. orthopaedie@kh-hellersdorf.de

Der Orthopäde (Germany) May 2002, 31 (5) p441-53, ISSN 0085-4530
Journal Code: 0331266

Publishing Model Print

Document type: Evaluation Studies; Journal Article ; English Abstract
Languages: GERMAN
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/21 (Item 21 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

13753943 PMID: 11413426
Lumbar sagittal alignment after fusion with a threaded interbody cage.
Goldstein J A; Macenski M J; Griffith S L; McAfee P C
Department of Orthopaedic Surgery, Seaport Orthopaedic Associates Spine
Center, New York University-Hospital for Joint Diseases, New York 10038,
USA.jeff.goldstein@med.nyu.edu
Spine (United States) May 15 2001, 26 (10) p1137-42, ISSN 0362-2436
Journal Code: 7610646
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/22 (Item 22 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

13295084 PMID: 10065526
Laparoscopic fusion of the lumbar spine : minimally invasive spine surgery. A prospective multicenter study evaluating open and laparoscopic lumbar fusion.
Regan J J; Yuan H; McAfee P C
Texas Back Institute, Plano, USA.
Spine (UNITED STATES) Feb 15 1999, 24 (4) p402-11, ISSN 0362-2436
Journal Code: 7610646
Publishing Model Print
Document type: Clinical Trial; Journal Article; Multicenter Study
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/23 (Item 23 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

13093537 PMID: 11064520
Anterior vertebral screw strain with and without solid interspace support.
Spiegel D A; Cunningham B W; Oda I; Dormans J P; McAfee P C ; Drummond D S
Division of Orthopaedic Surgery, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania 19104, USA.
Spine (UNITED STATES) Nov 1 2000, 25 (21) p2755-61, ISSN 0362-2436
Journal Code: 7610646
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH

Main Citation Owner: NLM
Record type: MEDLINE; Completed

11/3/24 (Item 24 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

12665523 PMID: 10586452

Augmentation of an anterior solid rod construct with threaded cortical bone dowels. A biomechanical study.

Spiegel D A; Drummond D S; Cunningham B W; Kanayama M; Haggerty C J; McAfee P C ; Dormans J P

Children's Hospital of Philadelphia, Pennsylvania, USA.

Spine (UNITED STATES) Nov 15 1999, 24 (22) p2300-6; discussion 2307, ISSN 0362-2436 Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/25 (Item 25 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

12625672 PMID: 10543014

Revision strategies for salvaging or improving failed cylindrical cages.

McAfee P C ; Cunningham B W; Lee G A; Orbegoso C M; Haggerty C J; Fedder I L; Griffith S L

Scoliosis and Spine Center, Union Memorial Hospital Baltimore, Maryland, USA.

Spine (UNITED STATES) Oct 15 1999, 24 (20) p2147-53, ISSN 0362-2436 Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/26 (Item 26 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

12359473 PMID: 9670400

Minimally invasive anterior retroperitoneal approach to the lumbar spine . Emphasis on the lateral BAK.

McAfee P C ; Regan J J; Geis W P; Fedder I L

Scoliosis and Spine Center, St. Josephs Hospital, Baltimore, Maryland, USA.

Spine (UNITED STATES) Jul 1 1998, 23 (13) p1476-84, ISSN 0362-2436 Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/27 (Item 27 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

10734316 PMID: 7939971

Interbody lumbar fusion using a carbon fiber cage implant versus allograft bone. An investigational study in the Spanish goat.

Brantigan J W; McAfee P C ; Cunningham B W; Wang H; Orbegoso C M

Department of Surgery, Creighton University, Omaha, Nebraska.

Spine (UNITED STATES) Jul 1 1994, 19 (13) p1436-44, ISSN 0362-2436

Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/28 (Item 28 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

10356545 PMID: 8235849

Static and cyclical biomechanical analysis of pedicle screw spinal constructs.

Cunningham B W; Seftor J C; Shono Y; McAfee P C

Biomechanical Testing Laboratory, Union Memorial Hospital, Baltimore, Maryland.

Spine (UNITED STATES) Sep 15 1993, 18 (12) p1677-88, ISSN 0362-2436

Journal Code: 7610646

Contract/Grant No.: AR38489-04; AR; NIAMS

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/29 (Item 29 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

09666755 PMID: 1785099

Survivorship analysis of pedicle spinal instrumentation.

McAfee P C ; Weiland D J; Carlow J J

Department of Orthopaedic Surgery, Johns Hopkins University School of Medicine, Johns Hopkins Hospital, Baltimore, Maryland.

Spine (UNITED STATES) Aug 1991, 16 (8 Suppl) pS422-7, ISSN

0362-2436 Journal Code: 7610646

Publishing Model Print

Document type: Case Reports; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/30 (Item 30 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

09470309 PMID: 1862424

Triangulation of pedicular instrumentation. A biomechanical analysis.

Ruland C M; McAfee P C ; Warden K E; Cunningham B W

Department of Orthopaedic Surgery, Johns Hopkins University, School of Medicine, Baltimore, Maryland.

Spine (UNITED STATES) Jun 1991, 16 (6 Suppl) pS270-6, ISSN 0362-2436 Journal Code: 7610646

Contract/Grant No.: AR 38489; AR; NIAMS

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/31 (Item 31 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

09470293 PMID: 1862413

The effect of spinal implant rigidity on vertebral bone density. A canine model.

McAfee P C ; Farey I D; Sutterlin C E; Gurr K R; Warden K E; Cunningham B W

Department of Orthopedic Surgery, Johns Hopkins University School of Medicine.

Spine (UNITED STATES) Jun 1991, 16 (6 Suppl) pS190-7, ISSN 0362-2436 Journal Code: 7610646

Contract/Grant No.: AR38489; AR; NIAMS

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/32 (Item 32 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

09301049 PMID: 2520086

In vitro spinal arthrodesis implant mechanical testing protocols.

Ashman R B; Bechtold J E; Edwards W T; Johnston C E; McAfee P C ; Tencer A F

Texas Scottish Rite Hospital for Crippled Children, Dallas 75219.

Journal of spinal disorders (UNITED STATES) Dec 1989, 2 (4) p274-81, ISSN 0895-0385 Journal Code: 8904842

Contract/Grant No.: AM-38489; AM; NIADDK; AR-36257; AR; NIAMS

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/33 (Item 33 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

09196087 PMID: 2259978 Record Identifier: 91081869

Influence of bone mineral density on the fixation of thoracolumbar implants . A comparative study of transpedicular screws, laminar hooks, and spinous process wires.

Coe J D; Warden K E; Herzig M A; McAfee P C

Orthopaedic Surgery Service, Brooke Army Medical Center, Fort Sam Houston, Texas.

Spine (UNITED STATES) Sep 1990, 15 (9) p902-7, ISSN 0362-2436

Journal Code: 7610646

Contract/Grant No.: AR38489; AR; NIAMS

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Other Citation Owner: NASA

Record type: MEDLINE; Completed

11/3/34 (Item 34 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

08304590 PMID: 3392061

Biomechanical analysis of posterior instrumentation systems after decompressive laminectomy. An unstable calf- spine model.

Gurr K R; McAfee P C ; Shih C M

Department of Orthopedic Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland 21205.

Journal of bone and joint surgery. American volume (UNITED STATES) Jun 1988, 70 (5) p680-91, ISSN 0021-9355 Journal Code: 0014030

Contract/Grant No.: AR38489; AR; NIAMS

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

11/3/35 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2006 BIOSIS. All rts. reserv.

0015505553 BIOSIS NO.: 200510200053

A prospective, randomized, multicenter food and drug administration investigational device exemption study of lumbar total disc replacement with the CHARITE (TM) artificial disc versus lumbar fusion Part II: Evaluation of radiographic outcomes and correlation of surgical technique accuracy with clinical outcomes

AUTHOR: McAfee Paul C (Reprint); Cunningham Bryan; Holsapple Gwen; Adams Karen; Blumenthal Scott; Guyer Richard D; Dmietriev Anton; Maxwell James H; Regan John J; Isaza Jorge

AUTHOR ADDRESS: ODea Med Assistants Bldg, Suite 104, 7505 Osler Ave, Baltimore, MD 21204 USA**USA

AUTHOR E-MAIL ADDRESS: Mack8132@aol.com

JOURNAL: Spine 30 (14): p1576-1583 JUL 15 2005 2005

ISSN: 0362-2436

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

11/3/36 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0015505552 BIOSIS NO.: 200510200052

**A prospective, randomized, multicenter food and drug administration
Investigational device exemptions study of lumbar total disc replacement
with the CHARITE (TM) artificial disc versus lumbar fusion Part I:
Evaluation of clinical outcomes**

AUTHOR: Blumenthal Scott (Reprint); McAfee Paul C ; Guyer Richard D;
Hochschuler Stephen H; Geisler Fred H; Holt Richard T; Garcia Rolando Jr;
Regan John J; Ohnmeiss Donna D

AUTHOR ADDRESS: Texas Back Inst, 6020 W Parker Rd 200, Plano, TX 75093 USA
**USA

AUTHOR E-MAIL ADDRESS: sblumenthal@texasback.com

JOURNAL: Spine 30 (14): p1565-1575 JUL 15 2005 2005

ISSN: 0362-2436

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

11/3/37 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0007457868 BIOSIS NO.: 199140100759

**LOAD TO FAILURE STRENGTHS OF SPINAL IMPLANTS IN OSTEOPOROTIC SPINES A
COMPARISON STUDY OF PEDICLE SCREWS LAMINAR HOOKS AND SPINOUS PROCESS
WIRES**

AUTHOR: COE J D (Reprint); HERZIG M A; WARDEN K E; MCAFEE P C

AUTHOR ADDRESS: DIV SPINAL RECONSTRUCTIVE SURGERY, DEP ORTHOP SURGERY,
JOHNS HOPKINS UNIV SCH MED, 600 N WOLFE ST, BALTIMORE, MD 21205, USA**USA

JOURNAL: Orthopaedic Transactions 14 (3): p727 1990

CONFERENCE/MEETING: COMBINED MEETINGS OF THE SCOLIOSIS RESEARCH SOCIETY AND
EUROPEAN SPINAL DEFORMITIES SOCIETY, AMSTERDAM, NETHERLANDS, SEPTEMBER
17-22, 1990. ORTHOP TRANS.

ISSN: 0162-9379

DOCUMENT TYPE: Meeting

RECORD TYPE: Citation

LANGUAGE: ENGLISH

11/3/38 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2006 Elsevier Science B.V. All rts. reserv.

13278784 EMBASE No: 2005330537

**A prospective, randomized, multicenter Food and Drug Administration
investigational device exemption study of lumbar total disc replacement
with the CHARITETrade; artificial disc versus lumbar fusion - Part II:
Evaluation of radiographic outcomes and correlation of surgical technique
accuracy with clinical outcomes**

McAfee P.C. ; Cunningham B.; Holsapple G.; Adams K.; Blumenthal S.;
Guyer R.D.; Dmitriev A.; Maxwell J.H.; Began J.J.; Isaza J.

Dr. P.C. McAfee, O'Dea Medical Assistants Building, 7505 Osier Avenue,
Towson, MD United States

AUTHOR EMAIL: Mack8132@aol.com

Spine (SPINE) (United States) 15 JUL 2005, 30/14 (1576-1583)

CODEN: SPIND ISSN: 0362-2436
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 20

11/3/39 (Item 2 from file: 73)

DIALOG(R)File 73:EMBASE

(c) 2006 Elsevier Science B.V. All rts. reserv.

12649972 EMBASE No: 2004213111

Nonfusion alternatives: Artificial disks and prosthetic nuclear replacement in the thoracolumbar spine

Vigna F.E.; McAfee P.C.

Dr. F.E. Vigna, Spine and Scoliosis Center, O'Dea Medical Arts Building,
7505 Osler Drive, Towson, MD 21204-7737 United States

AUTHOR EMAIL: fevmd@hotmail.com

Current Opinion in Orthopaedics (CURR. OPIN. ORTHOP.) (United States)
2004, 15/3 (159-166)

CODEN: COORE ISSN: 1041-9918

DOCUMENT TYPE: Journal ; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 28

11/3/40 (Item 3 from file: 73)

DIALOG(R)File 73:EMBASE

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11913839 EMBASE No: 2003024341

Principles for successful application of the Link(R) SB Charite(TM) Artificial Disk

GRUNDLAGEN EINER ERFOLGREICHEN ANWENDUNG DER LINK(R)
ZWISCHENWIRBEL-ENDOPROTHESE MODELL SB CHARITE(TM)

Buttner-Janz K.; Hahn S.; Schikora K.; Link H.D.

AUTHOR EMAIL: orthopaedie@kh-hellersdorf.de]

Orthopade (ORTHOPADE) (Germany) 2002, 31/5 (441-453)

CODEN: ORHPB ISSN: 0085-4530

DOCUMENT TYPE: Journal ; Conference Paper

LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH; GERMAN

NUMBER OF REFERENCES: 17

11/3/41 (Item 4 from file: 73)

DIALOG(R)File 73:EMBASE

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10976196 EMBASE No: 2001016907

Anterior vertebral screw starin with and without solid interface support

Spiegel D.A.; Cunningham B.W.; Oda I.; Dormans J.P.; McAfee P.C. ;
Drummond D.S.

Dr. D.S. Drummond, Division of Orthopaedic Surgery, Children's Hospital
of Philadelphia, Wood Building, 34th Street and Civic Center Blvd.,
Philadelphia, PA 19104 United States

Spine (SPINE) (United States) 01 NOV 2000, 25/21 (2755-2761)

CODEN: SPIND ISSN: 0362-2436

DOCUMENT TYPE: Journal ; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 42

11/3/42 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2006 Elsevier Science B.V. All rts. reserv.

04167617 EMBASE No: 1990050159
Symposium: Spinal instrumentation and the FDA
McAfee P.C.
Orthopaedic Surgery Johns Hopkins University School of Medicine
Baltimore, MD United States
Journal of Spinal Disorders (J. SPINAL DISORD.) (United States) 1989,
2/4 (272-273)
CODEN: JSDIE ISSN: 0895-0385
DOCUMENT TYPE: Journal; Conference Paper
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

11/3/43 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

13530985 Genuine Article#: 888VH No. References: 56
Title: Neurological complications of lumbar artificial disc replacement and comparison of clinical results with those related to lumbar arthrodesis in the literature: results of a multicenter, prospective, randomized investigational device exemption study of Charite intervertebral disc
Author(s): Geisler FH (REPRINT) ; Blumenthal SL; Guyer RD; **McAfee PC** ; Regan JJ; Johnson JP; Mullin B
Corporate Source: Rush Univ,Illinois Neuro Spine Ctr, Copley Med Ctr,2020 Ogden Ave,Suite 335/Aurora//IL/60504 (REPRINT); Rush Univ,Illinois Neuro Spine Ctr, Copley Med Ctr,Aurora//IL/60504; Texas Back Inst,Plano//TX/; St Josephs Med Ctr,Spine & Scoliosis Ctr,Towson//MD/; Cedars Sinai Inst Spinal Disorders,Los Angeles//CA/; Mt Carmel E Hosp,Columbus//OH/(fgeisler@concentric.net)
Journal: JOURNAL OF NEUROSURGERY-SPINE, 2004, V1, N2 (SEP), P143-154
ISSN: 0022-3085 Publication date: 20040900
Publisher: AMER ASSOC NEUROLOGICAL SURGEONS, UNIV VIRGINIA, 1224 WEST MAIN ST, STE 450, CHARLOTTESVILLE, VA 22903 USA
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